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DEPARTMENT OF THE ARMY

Procurement Programs



Approved to public releans

Committee Staff Procurement Backup Book FY 1998 / FY 1999 Budget Estimate WEAPONS AND TRACKED COMBAT VEHICLES

February 1997

FOR OUR STATE OF STAT

APPROPRIATION

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Index for WEAPONS AND TRACKED COMBAT VEHICLES

Blin	Nomenclature	SSN	Filename	Page Number
_	ABRAMS TRNG DEV MOD	GA5208	30330141.98P	-
8	BRADLEY BASE SUSTAINMENT	G80718	32897141.98P,	31
က	BRADLEY FVS TRAINING DEVICES	G20900	33078141.98P	43
4	HAB TRAINING DEVICES	G84600	33084141.98P	46
2	BRADLEY FVS TRAINING DEVICES (MOD)	GZ2500	33450141.98P	20
9	FIELD ARTILLERY AMMUNITION SUPPORT VEH	G80100	33636114.98P	62
7	ARMORED COMBAT EARTHMOVER	G82303	35320144.98P	29
8	ABRAMS TANK TRAINING DEVICES	GB1300	36984141.98P	72
9	COMMAND & CONTROL VEHICLE	G84200	39850141.98P	78
=	CARRIER, MOD	GB1930	30496101.98P	98
12	FIST VEHICLE (MOD)	GZ2300	31284141.98P	101
13	BFVS SERIES (MOD)	GZ2400	31678141.98P	107
4	HOWITZER, MED SP FT 155MM M109A6 (MOD)	GA0400	32072114.98P	150
16	FAASV PIP TO FLEET	GA8010	33638114.98P	159
17	IMPROVED RECOVERY VEHICLE (M88 MOD)	GA0570	33700141.98P	168
48	BREACHER SYSTEM (MOD)	GZ3200	34500141.98P	175
6	HEAVY ASSAULT BRIDGE (HAB) SYS (MOD)	GZ3250	34520141.98P	179
20	M1 ABRAMS TANK (MOD)	GA0700	36406141.98P	187
2	ABRAMS UPGRADE PROGRAM	GA0750	36500141.98P	242
52	ABRAMS UPGRADE PROGRAM (Adv Proc)	GA0750	36501141.98P	253
23	MODIFICATIONS LESS THAN \$2.0M (TCV-WTCV)	GA0925	38376101.98P	258
24	ITEMS LESS THAN \$2.0M (TCV-WTCV)	GL3100	33334100.98P	264
52	PRODUCTION BASE SUPPORT (TCV-WTCV)	GA0050	35960144.98P	266
58	ARMOR MACHINE GUN, 7.62MM	G13000	32472100.98P	269
53	MACHINE GUN, 5.56MM (SAW)	G12900	35632100.98P	275
30	GRENADE LAUNCHER, AUTO, 40MM, MK19-3	G13400	36106100.98P	281
32	M16 RIFLE	G14900	37528100.98P	287
33	5.56 CARBINE M4	G14904	38198100.98P	293

Index for WEAPONS AND TRACKED COMBAT VEHICLES

Blin	Blin Nomenclature	SSN	Filename	Page Number
34	M4 CARBINE MODS	GB3007	33010117 9AP	000
35	MEDIUM MACHINE GUNS (MODS)	GZ1300	33030117 98P	214
36	M119 MODIFICATIONS	00000	22640400 000	+ 00
!			22040100.30L	321
3	M16 RIFLE MODS	GZ2800	36456117.98P	330
38 8	MODIFICATIONS LESS THAN \$2.0M (WOCV-WTCV)	GC0925	39280117 98P	342
39	ITEMS LESS THAN \$2 0M (WOCK-WICK)	G1 3200	31863100 000	710
(GEORGO	31002100.301	100
1	PHODUCTION BASE SUPPORT (WOCV-WICV)	GC0050	33270144.98P	353
41	INDUSTRIAL PREPAREDNESS	GC0075	33400144.98P	356
42	SMALL ARMS (SOLDIER ENH PROG)	GC0076	34010117 98P	358
43	SPARES AND REPAIR PARTS (WTCV)	GE0150	34540107.98P	362



Appropriation: **WEAPONS & TRACKED COMBAT VEHICLES**

Activity: 1. **TRACKED COMBAT VEHICLES**

			(DOLS)				(THOUSANDS OF DOLLARS)	OF DOLL	ARS)		
N O	ITEM NOMENCLATURE	٥	FY 98 UNIT		FY 96		FY 97		FY 98		FY 99
			COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
(1)	(2)	(9)	(4)	(2)	(9)	(2)	(8)	(6)	(10)	(11)	(12)
	TRACKED COMBAT VEHICLES										
-	ABRAMS TRNG DEV MOD (GA5208)				3,017		3,181		2,222		6,440
8	BRADLEY BASE SUSTAINMENT (G80718)	60			133,869		234,774		125,591		342,423
က	BRADLEY FVS TRAINING DEVICES (G20900)	∢					572		1,417		9,544
4	HAB TRAINING DEVICES (G84600)										398
ις.	BRADLEY FVS TRAINING DEVICES (MOD) (GZ2500)	∢			1,813		851				2,143
φ	FIELD ARTILLERY AMMUNITION SUPPORT VEH (G80100)	∢		48	49,988	48	64,140				
^	ARMORED COMBAT EARTHMOVER (G82303)	∢				54	50,952				
60	ABRAMS TANK TRAINING DEVICES (GB1300)	∢			6,133		12,590		13,351		13,850
6	M1 ABRAMS TANK SERIES (MYP) (G82917)	٨			2,904						
9	COMMAND & CONTROL VEHICLE (G84200)	ø	6,179,400			လ	48,939	5	30,897	14	62,681
	SUB-ACTIVITY TOTAL				197,724	-	415,999		173,478		437,479
	MODIFICATION OF TRACKED COMBAT VEHICLES										,
F	CARRIER, MOD (GB1930)	∢			47,958		42,988		20,244		34,021
12	FIST VEHICLE (MOD) (GZ2300)	ω							14,656		16,169
13	BFVS SERIES (MOD) (GZ2400)	∢			93,101		119,037	_	61,232		46,640

DEPARTMENT OF THE ARMY FY 98/99 PROCUREMENT PROGRAM

Appropriation: "WEAPONS & TRACKED COMBAT VEHICLES**

Activity: 1. "TRACKED COMBAT VEHICLES"

			(DOLS)				(THOUSANDS OF DOLLARS)	OF DOLLA	(RS)		
LINE NO .	ITEM NOMENCLATURE	٥	FY 98 UNIT		FY 96		FY 97		FY 98		FY 99
			COST	ΩΤΥ	COST	QTY	COST	QTY	COST	ΔΤΥ	COST
Ξ	(2)	<u>(c)</u>	(4)	(2)	(9)	(7)	(8)	(6)	(10)	(11)	(12)
4	HOWITZER, MED SP FT 155MM M109A6 (MOD) (GA0400)	∢			281,986		105,890		18,706		11,538
15	HOWITZER, MED SP FT 155MM M109A5 (MOD) (GA0401)	∢			126		130				
16	FAASV PIP TO FLEET (GA8010)	⋖			6,434		13,814		1,922		438
14	IMPROVED RECOVERY VEHICLE (M88 MOD) (GA0570)	ω			54,363		55,687		28,601	••	40,229
18	BREACHER SYSTEM (MOD) (GZ3200)	8									10,444
19	HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)	0			14,611		51,322		42,205		51,950
50	M1 ABRAMS TANK (MOD) (GA0700)	∢			50,094		63,157		29,843		30,070
2	ABRAMS UPGRADE PROGRAM (GA0750) LESS: ADVANCE PROCURMENT (PY)	∢			320,515 -52,601		502,004 -297,218	•	587,714 -259,086		686,521
					267,914		204,786		328,628		420,293
22	ABRAMS UPGRADE PROGRAM (GA0750) ADVANCE PROCUREMENT (CY)				297,218		259,086		266,228		270,691
23	MODIFICATIONS LESS THAN \$2.0M (TCV-WTCV) (GA0925)				562		1,049		1,030		
	SUB-ACTIVITY TOTAL				1,114,367		916,946		813,295		932,483
	SUPPORT EQUIPMENT AND FACILITIES				,						
24	ITEMS LESS THAN \$2.0M (TCV-WTCV) (GL3100)				147		141		139		137



Appropriation: "WEAPONS & TRACKED COMBAT VEHICLES"

Activity: 1. **TRACKED COMBAT VEHICLES**

	= ·	(pors)				(THOUSANDS OF DOLLARS)	OF DOLL	(RS)		
ITEM NOMENCLATURE ID		FY 98 UNIT	L	FY 96		FY 97		FY 98		FY 99
		COST	ΩΤΥ	COST	QTY	COST	QΤΥ	COST	ατγ	COST
(2)	<u>@</u>	(4)	(2)	(9)	(7)	(8)	(6)	(10)	(11)	(12)
PRODUCTION BASE SUPPORT (TCV-WTCV) (GA0050)				5,323		9,319		8,942		9,150
REGIONAL MAINTENANCE TRAINING SITES-EQUIP (GA2449)				1,405		1,367				······································
SUB-ACTIVITY TOTAL	···	. i. i. ii		6,875		10,827	- ···	9,081		9,287
ACTIVITY TOTAL	-			1,318,966		1,343,772		995,854		1,379,249

Appropriation: **WEAPONS & TRACKED COMBAT VEHICLES**

Activity: 2. **WEAPONS AND OTHER COMBAT VEHICLE!

!			(DOLS)				(THOUSANDS OF DOLLARS)	OF DOLL	ARS)		
NO E	ITEM NOMENCLATURE	Ō	FY 98 UNIT		FY 96		FY 97		FY 98		FY 99
			COST	ΩTY	COST	ΔTY	COST	ΩΤΥ	COST	OTY	COST
Ē	(2)	(3)	(4)	(2)	(9)	(7)	(8)	(6)	(10)	(11)	(12)
	WEAPONS AND OTHER COMBAT VEHICLES										
27	PERSONAL DEFENSE WEAPON (ROLL) (GN0003)	∢		4,100	1,936						
58	ARMOR MACHINE GUN, 7.62MM M240 SERIES (G13000)	∢	. <u>-</u>			2,034	19,981			673	6,967
59	MACHINE GUN, 5.56MM (SAW) (G12900)	∢	13,716	9,430	27,585	3,802	12,092	406	5,569	1,570	4,887
30	GRENADE LAUNCHER, AUTO, 40MM, MK19-3 (G13400)	∢		1,500	32,812	2,150	33,168			720	13,075
31	MORTAR, 120MM (G02100)	∢			2,911						
32	M16 RIFLE (G14900)	∢	450	31,056	13,067	15,583	6,546	11,297	5,089	21,077	9,152
33	5.56 CARBINE M4 (G14904)	∢	629	9,785	6,292	10,603	6,546	7,484	5,089	15,352	9,568
	SUB-ACTIVITY TOTAL				84,603	·	78,333		15,747		43,649
	MODIFICATION OF WEAPONS AND OTHER COMBAT VEHICLES										
34	M4 CARBINE MODS (GB3007)	<			006		2,114		2,152		5,318
35	MEDIUM MACHINE GUNS (MODS) (GZ1300)	∢			6,292						
36	M119 MODIFICATIONS (GC0401)	4			 -				4,977		4,969
37	M16 RIFLE MODS (GZ2800)	∢		· · · · · · · · · · · · · · · · · · ·	2,751		5,526		7,603		7,060



Appropriation: **WEAPONS & TRACKED COMBAT VEHICLES**

Activity: 2. **WEAPONS AND OTHER COMBAT VEHICLE!

		(DOLS)				(THOUSANDS OF DOLLARS)		AHS)		
<u> </u>	<u> </u>	FY 98 UNIT	ш.	FY 96		FY 97		FY 98		FY 99
		COST	QTY	COST	ΔΤΥ	COST	ΩTY	COST	QTY	COST
(2)	(E)	(4)	(2)	(9)	(2)	(8)	6	(10)	(11)	(12)
MODIFICATIONS LESS THAN \$2.0M (WOCV-WTCV) (GC0925)				1,339		1,427		1,406		1,395
SUB-ACTIVITY TOTAL				11,282		90'6		16,138		18,742
SUPPORT EQUIPMENT AND FACILITIES										
ITEMS LESS THAN \$2.0M (WOCV-WTCV) (GL3200)				1,113		1,767		1,215		1,202
PRODUCTION BASE SUPPORT (WOCV-WTCV) (GC0050)				5,855		4,311		6,195		6,540
INDUSTRIAL PREPAREDNESS (GC0075)				5,283		5,086		5,758		5,713
SMALL ARMS (SOLDIER ENH PROG) (GC0076)				2,350		5,839		4,178		5,598
SUB-ACTIVITY TOTAL				14,601		17,003		17,346		19,053
				110,486		104,403		49,231		81,444

DEPARTMENT OF THE ARMY FY 98/99 PROCUREMENT PROGRAM

Appropriation: **WEAPONS & TRACKED COMBAT VEHICLES**

Activity: 3. **SPARES AND REPAIR PARTS**

	LINE NO.	Ī	Ξ		54				-
	ITEM NOMENCLATURE		(2)	**SPARES AND REPAIR PARTS**	SPARES AND REPAIR PARTS (WTCV) (GE0150)	SUB-ACTIVITY TOTAL	ACTIVITY TOTAL	APPROPRIATION TOTAL	
	٥		(3)			-			
(DOLS)	FY 98 UNIT	COST	(4)						
		ΩΤΥ	(2)	······································				····	
	FY 96	COST	(9)	·····	25,279	25,279	25,279	1,454,731	
		ΔΤΥ	(2)			. 6			
(THOUSANDS OF DOLLARS)	FY 97	COST	(8)		20,280	20,280	20,280	1,468,455	 -
OF DOLL		QTY	(6)		-				
4RS)	FY 98	COST	(10)		20,622	20,622	20,622	1,065,707	
		QTY	(11)						
	FY 99	COST	(12)		14,413	14,413	14,413	1,475,106	

						DATE		
	BUD	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	IVITY			P-1 ITEM NOMENCLATURE	ш			
PROCUREMEN	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat	T VEHS /Tracked Combat \	Vehicles			ABRAMS TRNG DI	ABRAMS TRNG DEV MOD (GA5208)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	3.0	3.2	2.2	6.4	2.8	5.7	5.9	6.0

DESCRIPTION: Funding provided will accomplish modifications to Abrams Training Devices required as a result of changes to the Abrams tanks or tank training requirements. These changes are hardware and software modifications to existing equipment to keep simulators abreast of developments in the Abrams Tank System. JUSTIFICATION: The program reflected here-in is structured to meet needs validated by the Abrams user community. Degradation of tank training will occur if these modifications are delayed or deleted. The intended sites for the Conduct of Fire Trainer (COFT) M60A3 to M1 Conversions are for the National Guard units. The average expected gunner and commander thoughput per year for the modified COFT is 3,016. The Conduct of Fire Trainer (COFT) M1 to M1A1, Optical Improvement (OIP) and Armament Enhancement Initiative (AEI) modifications are for units at FORSCOM, USAREUR, TRADOC, and National Guard. Budget Item Justification Sheet

Exhibit P-40

	DATE	ut
BUDGET ITEM JUSTIFICATION SHEET	EET	February 1997
APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE	
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles		ABRAMS TRNG DEV MOD (GA5208)

OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-03-05-4430	M60A3 to M1 Conversion Kits	version Kits						
Operational	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-90-05-7877	OIP Modification to M1A1 COFTS	o M1A1 COFTS	Printed Accounts					
Operational	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-93-05-4452	AEI							
Operational	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-92-06-4419	M1 to M1A1 Modification Kits	fication Kits						
Operational	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TBD1	Conduct of Fire Ti	ainer (COFT) Ima	ige Generator (II	Conduct of Fire Trainer (COFT) Image Generator (IG) and Computer Upgrade	Upgrade			
Operational	0.0	3.2	2.2	2.4	0.8	0.8	0.8	0.0
TBD2	AGTS/SEP MOD							
OPERATIONAL	0.0	0.0	0.0	0.0	0.0	1.3	2.4	2.9
TBD3	Tank Driver Train	er Mod (M1A2 SE	P Upgrade)					
Operational	0.0	0.0	0.0	4.0	1.5	0.0	0.0	9.0
TBD4	Close Combat Tactical Trainer (CCTT)/SEP Mod	ctical Trainer (CC	TT)/SEP Mod					
OPERATIONAL	0.0	0.0	0.0	0.0	0.2	1.8	2.7	2.5
TBD5	Maintenance Trair	Maintenance Training System (MTS) SEP Mod	SEP Mod					
Operational	0.0	0.0	0.0	0.0	0.3	1.8	0.0	0.0
	•	Ċ	Ċ	•	Ċ	; L	i	(
lotais	11.4	3.2	2.2	6.4	2.8	2.7	5.9	9.0
								i
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	Ž	DDIFIC/	MODIFICATION INSTALLATION SUMMAH □□□□□	STALL/	VTION S	JMMAR	Date		
								February 1997	7
			(TOA, Dollars in Millions)	llars in	Millions)				
	ձ								
System/Modification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	EY 2003	TOTAL
No P3a Set for modification	**************************************								٠
ABRAMS TRNG DEV MOD									
GA5208									
M60A3 to M1 Conversion Kits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIP Modification to M1A1 COFTS	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
AEI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M1 to M1A1 Modification Kits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Conduct of Fire Trainer (COFT) Image Generator (IG) and Compute		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AGTS/SEP MOD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tank Driver Trainer Mod (M1A2 SEP Upgrade)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Close Combat Tactical Trainer (CCTT)/SEP Mod	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maintenance Training System (MTS) SEP Mod	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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					•			,	
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								•••••	

	INDIVIDUAL MODIFICATION Date February 1997	266
MODIFICATION TITLE:		
MODELS OF SYSTEMS AFFECTED: N	M60A3 COFTs.	
DESCRIPTION / HISTIFICATION:		
The Conduct of Fire Trainer (COF with ammunition consumption. The	The Conduct of Fire Trainer (COFT) provides the ready capability for precision tank gunnery training while reducing the O&S costs associated with ammunition consumption. The COFT is configured to the tank system it supports.	ated
In support of the Abrams fielding sc The structure has changed to make M60A3 COFTs to M1 configuration.	In support of the Abrams fielding schedule, the conversion of M60A3 COFTs to M1 COFTs is required to meet the Army's new force structure. The structure has changed to make the M60 tank and training devices obsolete. This situation establishes an urgent requirement to convert the M60A3 COFTs to M1 configuration.	ure. rt the
Without this modification, one of the	Without this modification. one of the following most likelv will occur: 1) Negative training results from using outdated COFTs: 2) In lieu of using	usina
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	DPMENT MILESTONES:	

	ACCOMPLISHED		1096		1Q96			
	PLANNED N/A	N/A	4095	N/A	4Q95	N/A	N/A	
MENT OF THE STATE	Preliminary Design Review:	Critical Design Review:	Contractor Test and Evaluation:	Development Test and Evaluation:	initial Operational Test and Evaluation:	IPR Production Decision	TDP Available:	

					IQNI	VIDUAL	MODIF	INDIVIDUAL MODIFICATION	z]	Date		Februs	February 1997	
MODIFICATION TITLE (Cont):		M6	M60A3 to M1		Sonve	sion k	(its 1-	Conversion Kits 1-03-05-4430	4430									:		
FINANCIAL PLAN: (\$ in Millions)	2	Ţ																		
	and Prior	حلـ ة م	FY 1997	797	FY 1998	86	FY 1999	666	FY 2000	S S	FY 2001	100	FY 2002	202	FY 2003	003	75	0	TOTAL	AL
	ĝ	╁	ð	69	ð	\$	Q.	\$	Qt	\$	ğ	\$	ð	ક્ક	ð	æ	ξ	છ	δ	es.
RDT&E		-																		
PROCUREMENT										•									1	1
Kit Quantity	20	3.8										_							20	တ
Installation Kits		9.						-					_							9.
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																•				
Data			···																-	
Training Equipment																				
Support Equipment				•••																
Other																				
Interim Contractor Support			-							-										
					. 10-															
Installation of Hardware						•														
FY 1996 & Prior Eqpt Kits																				
FY 1997 Eqpt Kits				·											•					
FY 1998 Eqpt Kits																				
FY 1999 Eqpt Kits																				
FY 2000 Eqpt kits																			•••	
FY 2001 Eqpt kits								•					-							
FY 2002 Eqpt kits																				
FY 2003 Eqpt kits															,,,,					
(FY(TC) Eqpt (xx kits)					1			1			1									
Total Installation Cost				1			1		1	1	1									
Total Procurement Cost		5.4			\exists	\exists														5.4
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METHOD OF IMPLEMENTATION: Contractor	A: Contrac	itor		•	*DWIN	STRATI	VE LE/	ADMINISTRATIVE LEADTIME:		-	Months		PRODUCEV 1999:	CTION	PRODUCTION LEADTIME: EX 1999:	ij Z	72	Months		
Contract Dates:	Ĺú	FY 1997: EV 1097:				_ 4	FY 1998: FV 1998:						FY 1999:							
Delivery Date:		1991													l					

Installation Schedule: M60A3 to M1 Conversion Kits 1-03-05-4430	ıle: M€	30A3	to M1	Cor	iversi	on Ki	ts 1-c	3-05	4430								Date		Febr	February 1997						
	FY 1996		Ŧ	FY 1997			Ĺ	FY 1998			í	FY 1999			Ŧ	FY 2000			FY 2001	5						
	& Prior	-	C)	က	41	H	ΟI	വ	4 1		CVI	(C)	41	-	o.a	m	4	•	Q	က	4				ř	Total
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FY 1996 & Prior	16	4																								ć
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FY 1998																										
FY 1999																										
Outputs																										
FY 1996 & Prior	13		8	4	_	_																				8
FY 1997																										N N
FY 1998																										
FY 1999																										
		_	FY 2000	ō			FY 2001	001			FY 2002	202			FY 2003	33			FY 2004			Ą	FY 2005			
		-	8	က	4		_	82	က	4	-	2	3 4	-	03	က	4	-	8	က	4	-	8	ო	4 To	Total
Inputs																										
FY 2000																										
FY 2001																										
FY 2002																										
FY 2003																										
Outputs																										
FY 2000																										
FY 2001																										
FY 2002																										
FY 2003			i																							
Remarks:																										
																										•

Installation costs are included within the hardware contract and cannot be broken out.

	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	OIP Modification to M1A1 COFTS 1-90-05-7877		
MODELS OF SYSTEMS AFFECTED:	M1A1 UCOFTs.		

DESCRIPTION / JUSTIFICATION:

This modification is required because the tank's optics now include filters to protect the crew from eye damage resulting from exposure to lasers. To accomodate the improved optics, a new switch, which induces the eye safe laser filters, has been added and the switch used to change the gunner's sight from high to low power has been redesigned and relocated. Training with the Conduct of Fire Trainers (COFTs) will enable the gunners and commanders to quickly find and use the correct switches by touch.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:			
Preliminary Design Review:	PLANNED N/A	ACCOMPLISHED	
Critical Design Review:	N/A		
Contractor Test and Evaluation:	1096	1096	
Development Test and Evaluation:	N/A		
Initial Operational Test and Evaluation:	2096	3096	
IPR Production Decision	N/A		
TDP Available:	N/A		

lication

Installation Schedule:		OIP Modification to M1A1 COFTS 1-90-05-7877	ation te	M 1A	00	FTS 1-	90-05	7877							Date		Febru	February 1997					
	₽	£	FY 1997			FY 1998	86		Œ	FY 1999			FY 2	FY 2000			FY 2001	Ξ					
	& Prior 1	-1	ന	41	-	αı	mi	4	CME	က	41	7	OI	ro)	41	-	C I	m	4 1				Total
Inputs FY 1996 & Prior	50		20		20	20	15																95
FY 1997 FY 1998																							
FY 1999																							
Outputs																							
FY 1996 & Prior			20	8	9	9	20	15										-					95
FY 1997																							
FY 1998																							
FY 1999																							
		FY 2000	000			FY 2001			FY 2002	3002			FY 2003	8		虹	FY 2004			FY 2005	3005		
		-	2 3	4	-	8	ო	4	-	α	3	4	- 2	က	4	-	8	ဇာ	4	-	0	3 4	Total
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c tick																							
FY 2000																							
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FY 2003							ļ																
Remarks:																							
Installation costs are included within the hardware contract and cannot be broken out.	re included wi	thin the h	ardware	contrac	t and ca	annot be	broken (žť.															

	INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	AEI 1-93-05-4452			
MODELS OF SYSTEMS AFFECTED:	M1A1 UCOFTs.			
DESCRIPTION / JUSTIFICATION:				
The Armament Enhancement Initiative (AEI), 120n latest configuration of the tank. Addition of new ro training and can only be provided in the COFT. The benefit of training with the COFT is in training gunn fire the actual rounds. Using the existing COFTs we configuration as the tank system it supports.	The Armament Enhancement Initiative (AEI), 120mm tank round modification is required to change the configuration of the tank. Addition of new rounds causes switch changes and additional sight reticles in the tank. These changes affect training and can only be provided in the COFT. The COFT will require both hardware and software changes to provide this capability. A key benefit of training with the COFT is in training gunners and commanders on the capability of new rounds with special features without having to fire the actual rounds. Using the existing COFTs without this capability results in severe negative training. The COFT must maintain the same configuration as the tank system it supports.	is required to change the case and additional sight reticardware and software change capability of new rounds in severe negative training	configuration of the M1. les in the tank. These ges to provide this cap with special features w with COFT must ma	A1 COFT to the changes affect pability. A key without having to aintain the same
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	VELOPMENT MILESTONES:			
		PLANNED	ACCOMPLISHED	

ACCOMPLISHED		1096		3096			
PLANNED N/A	N/A	1096	N/A	2096	N/A	N/A	
Prefiminary Design Review:	Critical Design Review:	Contractor Test and Evaluation:	Development Test and Evaluation:	Initial Operational Test and Evaluation:	IPR Production Decision	TDP Available:	

				INDI	INDIVIDUAL MODIFICATION	ODIFIC	ATION							Date		February 1997	v 1997	
MODIFICATION TITLE (Cont):		AEI 1-93-05-4452	3-05-4	452														
FINANCIAL PLAN: (\$ in Millions)	FV 1996	_																
	and Prior	FY 1997	266	FY 1998	98	FY 1999	-	FY 2000	FY	FY 2001	FY 2002	200	FY 2003	203	77		TOTAL	A.
	City \$	δ	€	δ	မ	Ofy G	\$	€	ð	æ	ģ	8	ĝ	8	Ş	s	δ	\$
RDT&E																		
7 t O O O O O O O O O O O O O O O O O O																		
Installation Kits	100																100	1.2
Installation Kits Nonrecurring	0.5	~~~																0.5
Equipment																	-	
Equipment Nonrecurring	-											•						
Engineering Change Orders								-	-									
Data																		
Training Equipment																		
Support Equipment	····		"															
Other													-	-	-			
Interim Contractor Support								<u>-</u>										
					··········		· · · · · · · · · · · · · · · · · · ·											
Installation of Hardware																		
FY 1996 & Prior Eqpt Kits																		
FY 1997 Eqpt Kits																		
FY 1998 Eqpt Kits														-		. .		
FY 1999 Eqpt Kits					,													
FY 2000 Eqpt kits																		
FY 2001 Eqpt kits													-					
FY 2002 Eqpt kits												·						
FY 2003 Eqpt kits																	•	
(FY(TC) Eqpt (xx kits)	-																	
Total Installation Cost																		
Total Procurement Cost	1.7					\sqcup												1.7
					1	i.	į	•		,	9	i		!		:		
METHOD OF IMPLEMENTATION: Confractor	: Contractor EV 4007:	č	•	AUMINISTRATIVE LEADTIME: EX 4009:	AA I	: LEAUI	<u>₹</u>	מ	Months	S.	PHODUC EV 4500:	20 .	PHODUCTION LEADTIME: EX 1000:	.: ∐	≥ 8-	Months		
Contract Dates:	FT 1997.				ב ב	FY 1996:					FY 1999; FV 1000	w <u>.</u>						
Delivery Date.	-	 				3					3							

FPT 1986 FPT 1987 FPT 1989 FPT 1980 FPT 2000	Installation Schedule:		€-1 E	AEI 1-93-05-4452	4452												~	Date		Febru	February 1997	_				
8 Prior 1 2 3 4 1 3 3 4 1 3 3 4 1 3 3 4 3 4 3		FY 1996		FΥ	1997			₹	1998			Ę	1999			FY 2(000			FY 20(Ξ					
A Prior 20 20 20 20 20 20 20 20 20 20 20 20 20		& Prior		2	က	41	-	αı	വ	41	-	QI	ന	4	-	C)	က	4	-	8	က	4				Tota
8 Prior 20 20 20 20 20 20 20 20 20 20 20 20 20	Inputs								ı	i	I	I	i	1	i	1	1	1	i	1		1				
8 Prior 20 20 10 10 20 20 FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 I 2 3 4 I 2 3 4 I 2 3 4 I 2 3 4 I 2 0.05 are included within the hardware contract and cannot be broken out.	FY 1996 & Prior	20			20	_	×																			7
8 Prior 20 20 10 10 20 20 FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	FY 1997																									:
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: 1 costs are included within the hardware contract and cannot be broken out.			-	7								2		4	-	N	က	4	-	8	က	4	-	Ø	က	
"Y 2000 "Y 2002 "Y 2003 "Y 2000 "Y 2001 "Y 2001 "Y 2002 "Y 2003 "Y 2003 "Y 2004 "Y 2005 "Y 2006 "Y 2007 "Y 2008 "Y 2008 "Y 2009 "Y 2009 "Y 2006 "Y 2007 "Y 2008 "Y 2008 "Y 2009 "Y 2009 "Y 2009 "Y 2006 "Y 2007 "Y 2007 "Y 2008 "Y 2009 "Y 2009 <td< td=""><td>nputs</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	nputs																									
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"Y 2003 "Y 2004 "Y 2002 "Y 2003 "Y 2003 "Y 2003 "Y 2003 "Stall at location costs are included within the hardware contract and cannot be broken out.	·Y 2002																									
Y 2000 Y 2001 Y 2002 Y 2003 Y 2003 I Paralysis are included within the hardware contract and cannot be broken out.	·Y 2003																									
:Y 2000 -Y 2002 -Y 2003 -Y 2003 -Y 2013 -Y 201	Outputs																									
=Y 2001 =Y 2002 =Y 2003 *Pemarks: Installation costs are included within the hardware contract and cannot be broken out.	۲۰ 2000																									
ry 2002 ry 2003 **Nemarks: Nemarks: Nemarks: Nexialiation costs are included within the hardware contract and cannot be broken out.	-Y 2001																									
=Y 2003 **Pemarks: Installation costs are included within the hardware contract and cannot be broken out.	-Y 2002																									
Remarks: nstallation costs are included within the hardware contract and cannot be broken out.	-Y 2003																									
nstallation costs are included within the hardware contract and cannot be broken out.	Remarks:																									
	nstallation costs ar	e jucinded	within	the har	dware	contrac	ot and c	annotb	e broke	in out.																

Modification	
Individual	
Exhibit P-3a	

	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	M1 to M1A1 Modification Kits 1-92-06-4419		
MODELS OF SYSTEMS AFFECTED:	M1 COFTs		
DESCRIPTION / JUSTIFICATION:			
The Conduct of Fire Trainer (COFT) provides the with ammunition consumption. The COFT is confi	The Conduct of Fire Trainer (COFT) provides the ready capability for precision tank guwith ammunition consumption. The COFT is configured to the tank system it supports.	eady capability for precision tank gunnery training while reducing the O&S costs associated gured to the tank system it supports.	S costs associated
In support of the Abrams fielding schedule, the M1 army divisions, as well as selected National Guard School requires all M1A1 ICOFTs (four COFT crew Reserve Component training, be modified (hardwa situation establishes a requirement to upgrade the	In support of the Abrams fielding schedule, the M1 to M1A1 COFT modification is required to meet the Army's new force structure. All active army divisions, as well as selected National Guard units receiving the M1A1 tank have or will receive the modification. Additionally, the Arm School requires all M1A1 ICOFTs (four COFT crew stations), except for one standard M1 ICOFT and one linked M1 ICOFT used to provide Reserve Component training, be modified (hardware and software) to support basic and advance training of gunners and commanders. This situation establishes a requirement to upgrade the Armor School's M1 ICOFTs to the M1A1 capability.	to M1A1 COFT modification is required to meet the Army's new force structure. All active units receiving the M1A1 tank have or will receive the modification. Additionally, the Armor v stations), except for one standard M1 ICOFT and one linked M1 ICOFT used to provide re and software) to support basic and advance training of gunners and commanders. This Armor School's M1 ICOFTs to the M1A1 capability.	ructure. All active ditionally, the Armor used to provide ommanders. This
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTON	ES:	ANNED ANNED	Q
Preliminary Design Review:			
Critical Design Review:		N/A	
Contractor Test and Evaluation:	aluation:	4Q97	
Development Test and Evaluation:	Evaluation:	N/A	
Inital Operational Test and Evaluation:	nd Evaluation:	1Q98	
IPR Production Decision	_	N/A	
TDP Available:		N/A	

					IND	IVIDUA	IL MOL	INDIVIDUAL MODIFICATION	NOI							Date		Febru	February 1997	
MODIFICATION TITLE (Cont):		Σ	1 to N	M1 to M1A1 Mc	Aodific	ation	Kits 1	odification Kits 1-92-06-4419	3-4419											
FINANCIAL PLAN: (\$ in Millions)	FY 1996	966																		
	and Prior	rlor	FΥ	FY 1997	FY 1998	866	FY	FY 1999	FY	FY 2000	FY 2001	1001	FY 2	FY 2002	FY	FY 2003		TC	ТО	TOTAL
	₹	₩	Q.	\$	Qţ	\$	Ωţ	ક	ð	\$	ĝ	\$	Q.	\$	ð	\$	ð	€>	Q Q	\$
RDT&E	***************************************																			
PROCUREMENT																				
Installation Kits	ά																		9	•
Installation Kits Nonracturing	2																		2	
Equipment		?																		
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
					-															
Installation of Hardware																				
FY 1996 & Prior Eqpt Kits																				
FY 1997 Eqpt Kits																				
FY 1998 Eqpt Kits																				
FY 1999 Eqpt Kits								******						,						
FY 2000 Eqpt kits																				
FY 2001 Eqpt kits				•																
FY 2002 Eqpt kits																				
FY 2003 Eqpt kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost																				
Total Procurement Cost		2.2																		2.2
METHOD OF IMPLEMENTATION: Contractor	Contra	į			ADMIN	STRAT	1 HVI	ADMINISTRATIVE I FADTIME:	ú	σ	Monthe		חסממ	NOITO	PRODUCTION I FADTIME:	i Wil	ά	Months		
Contract Dates:		FY 1997:	21.2				FY 1998:	.; ;	i				FY 1999:) } } } }		i				
Delivery Date.		788					<u> </u>	, jo					1881	,						

Installation Schedule:	l	M1A	1 Mod	ificatio	n Kits	1-92-0	M1 to M1A1 Modification Kits 1-92-06-4419							Date		֓֡֓֟֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֓֡	February 1997	261			·	
	FY 1996		FY 1997			FY 1998	86		Ŧ	FY 1999			FY 2000	0		Ŧ	FY 2001					
	& Prior 1	C/I	(C)	41	-	αı	ලා	4	⊘ I	ଜା	41	-	NI	€ 44	 1	ત્યા	ത	41				Total
Inputs																						
FY 1996 & Prior						4		4		4	4		8									18
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior							4		4	4		4		7								18
FY 1997																						
FY 1998																						
FY 1999																						
		Ŧ	FY 2000			FY 2001			FY 2002	302		ш.	FY 2003			FY 2004	4		F	FY 2005		
		-	α	ъ 4	_	0	က	4	-	2 3	4	-	8	က	4	1 2	60	4	-	2 3	4	Total
Inputs																						
FY 2000																						
FY 2001																						
FY 2002																						
FY 2003																						
Outputs																						
FY 2000																						
FY 2001																						
FY 2002																						
FY 2003																						
Remarks:																						
Installation costs are included within the hardware contract and cannot be broken out.	included with	in the	hardwar	e contra	t and c	annot be	broken o	ŧ;														
Funds are for software modifications to provide ICOFT capability to M1A1 UCOFTs and MCOFTs within the reserve components.	re modificatic	ns to p	orovide I	COFT ca	ipability	to M1A1	UCOFT	s and M	COFTs v	vithin the	reserve	odwoo	nents.									

	INDIVIDUAL MODIFICATION Date	February 1997
MODIFICATION TITLE:	Conduct of Fire Trainer (COFT) Image Generator (IG) and Computer Upgrade TBD1	
MODELS OF SYSTEMS AFFECTED:	M1 and M1A1 COFTs	
DESCRIPTION / JUSTIFICATION:		

The Image Generator (IG) and computer subsystems that are presently being used in the COFTs are approaching obsolescence. It is becoming software changes and more cost effective parts and maintenance. This will position the COFT fleet to support tank units and institutions beyond replacement parts are becoming more expensive or entirely not available on the commercial market. Likewise, the software designed to run on these components is also difficult to sustain. The goal is to obtain a replacement IG and computer that will provide for cheaper and easier more difficult to obtain parts for these IGs since they are of the early 1980's design. Sustainability is becoming a major issue as repair and the year 2000.

	ACCOMPLISHED						
	PLANNED N/A	N/A	3098	N/A	4098	N/A	N/A
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	Preliminary Design Review:	Critical Design Review:	Contractor Test and Evaluation:	Development Test and Evaluation:	Inital Operational Test and Evaluation:	IPR Production Decision	TDP Available:

				MON	/IDUAL	MODIF	INDIVIDUAL MODIFICATION							Date		February 1997	y 1997	
MODIFICATION TITLE (Cont):		Sonduc	Conduct of Fir	e Train	er (CC)FT) In	e Trainer (COFT) Image Generator (IG) and Computer Upgrade TBD1	enerat	or (IG)	and C	ompute	ır Upgr	ade Ti	301				
FINANCIAL PLAN: (\$ in Millions)	FY 1996	-																
	and Prior	FΥ1	1997	FY 1998	88	FY 1999	H	FY 2000	\vdash	FY 2001	FY.	FY 2002	FY 2003	Н	TC		TOTAL	AL
	\$ AD	ð	ક્ક	δ	€	Οţ	\$	\$ Ap	ð	€9	ð	ક	ğ	€9	ξ	₩	ģ	S
RDT&E																		
Kit Quantity					-													
Installation Kits				-	-0.	16	2.4	16	0.8	16 0.8	3 16	0.8					65	4.9
Installation Kits Nonrecurring			3.2		2.1		-			·						-		5.3
Equipment																		
Equipment Nonrecurring																		
Engineering Change Orders																		
Data																		
Training Equipment								·····										
Support Equipment								***										
Other																		
Interim Contractor Support																		
								<u>.</u>										
Installation of Hardware			,				-							····				
FY 1996 & Prior Eqpt Kits																		
FY 1997 Eqpt Kits																		
FY 1998 Eqpt Kits																		
FY 1999 Eqpt Kits																	•	
FY 2000 Eqpt kits															• • • • • • • • • • • • • • • • • • • •			
FY 2001 Eqpt kits																		
FY 2002 Eqpt kits																		
FY 2003 Eqpt kits																		
(FY(TC) Eqpt (xx kits)					1													
Total Installation Cost																		
Total Procurement Cost			3.2		2.2		2.4		0.8	0.8		0.8						10.2
							ļ	•			0	i d		ļ		:		
METHOD OF IMPLEMENTATION: Contractor Contract Dates:	I: Confractor FY 1997:	97:	, 10-unr	ADMINISTRATIVE LEADTIME: FY 1998:	₹ ₹ ₹	IVE LEAU FY 1998:	.: E	1 Jun-98	Monins 98	S	FY 1999:	PRODUCTION LEADTIME: FY 1999: Jun-99	LEAU.	Jun-99	<u>ი</u>	Months		
Delivery Date:	FY 1997:	97:			Œ	FY 1998:		Sep-99	66:		FY 1999:	6	ŭ	Sep-00				

Installation Schedule:	ule: Conduct of Fire Trainer (COFT) Image Generator (IG) and Computer Upgrade Date	February 1997	
u.	FY 1996 FY 1997 FY 1998 FY 1999 FY 2000	FY 2001	
	8 Prior 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1	2 3 4	Total
Inputs			,
FY 1996 & Prior			
FY 1997			
FY 1998			-
FY 1999	16		16
Outputs			
FY 1996 & Prior			
FY 1997			
FY 1998	-		_
FY 1999	16		16
	FY 2000 FY 2001 FY 2002 FY 2003	FY 2004 FY 2005	
	12341234123412341	2 3 4 1 2 3 4	Total
Inputs			
FY 2000	16		16
FY 2001	16		16
FY 2002	16		16
FY 2003			-
Outputs			
FY 2000	16		16
FY 2001	16		16
FY 2002	16		16
FY 2003			
Remarks:			
Installation costs are	Installation costs are included within the hardware contract and cannot be broken out. Software block unreades are included in these costs		



	INDIVIDUAL MODIFICATION	Date	le February 1997
MODIFICATION TITLE:	AGTS/SEP MOD TBD2		
MODELS OF SYSTEMS AFFECTED:	M1A2 Advanced Gunnery Training System		
DESCRIPTION / JUSTIFICATION:			
AR 350-38 requires Program Mana modifications to the system they sr recent SEP changes to the M1A2.	AR 350-38 requires Program Managers to program and budget funds to support changes to fielded training devices resulting from changes or modifications to the system they support. This funding will modify existing M1A2 Advanced Gunnery Training Simulators to represent the most recent SEP changes to the M1A2.	nges to fielded training devices ranced Gunnery Training Simu	s resulting from changes or ulators to represent the most
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		PI ANNED	ACCOMPLISHED
Examples Preliminary Design Review:			
Critical Design Review:		3002	
Contractor Test and Evaluation:	aluation:	3003	
Development Test and Evaluation:	<u> </u> evaluation:	3003	
Inital Operational Test and Evaluation:	nd Evaluation:	4003	
IPR Production Decision		4003	
TDP Available:		4003	

				Z	DIVIDU	AL MOE	INDIVIDUAL MODIFICATION	NO							ate		a do	Enhance 4007	İ
MODIFICATION TITLE (Cont):		AGTS	AGTS/SEP MOD TBD2	MOD	'BD2														
FINANCIAL PLAN: (\$ in Millions)	FY 1996	Γ-																	
	d Pri	丘	199	F	1998	F	FY 1999	FY	FY 2000	FY 2001	9	FY 2002	202	FY 2003	03	TC		TOTAL	Ā
_	Ofy \$	ğ	ક	ğ	S th	Qţ	\$	Q	\$	ð	69	Q.	\$	ğ	8	à	8	2 ∂	9
RDT&E														+					
PROCUREMENT																-		, -	
Kit Quantity																			
Installation Kits														٥	14	7	9	7	,
Installation Kits Nonrecurring											6		4.0	ı	ν.	!	?	-	i . r
Equipment											?				?				9.0
Equipment Nonrecurring	-									-									
Engineering Change Orders																			
Data												-							
Training Equipment										-									
Support Equipment																			
Other												-,				•			
Interim Contractor Support																			
												_							
Installation of Hardware																			
FY 1996 & Prior Eqpt Kits																			
FY 1997 Eqpt Kits																			
FY 1998 Eqpt Kits																			
FY 1999 Eqpt Kits			~																
FY 2000 Eqpt Kits																			
FY 2001 Eqpt Kits			~~~				_		-									,	
FY 2002 Eqpt Kits										-									
FY 2003 Eqpt Kits																			
(FY(TC) Eqpt (xx kits)																			
Total Installation Cost										\mathbf{I}	-	-		\dagger	\dagger	-	\dagger		
Total Procurement Cost											1.3		2.4		2.9		6.0		12.6
METHOD OF IMPLEMENTATION: Contractor Contract Dates:	Contractor FY 1997:	:24		ADMIN	ISTRAT	IVE LEAI FY 1998:	ADMINISTRATIVE LEADTIME: FY 1998:		9	Months	O. ÍL	PRODUC FY 1999:	PRODUCTION LEADTIME: FY 1999:	EADTIN	ij	18 M	Months		
Delivery Date:	FY 1997:	37:				FY 1998:					. íL	FY 1999:							
														l					

Installation Schedule: AGTS/SEP MOD TBD2	MOD TB	20										Date			February 1997	1997					
÷	FY 1997		4	FY 1998			F 7	FY 1999			FY 2000			Œ	FY 2001						
& Prior 1 2	ю	4 H	1 2	(C)	41	-	C)	(C)	41	-	(2) (3)	4	-	C4	ы	41					Total
Inputs																					
FY 1996 & Prior																					
FY 1997																					
FY 1998																					
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Outputs																					
FY 1996 & Prior																					
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FY 2000	00		Ŧ	FY 2001			FY 2002	Ø		Œ	FY 2003			FY 2004	900			FY 2005	35		
1 2	e -	4	-	8	ຕ	4	2	က	4	-	2	က	4	_	Ω.	ر 8	4	1 2	ဗ	4	Total
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Outputs																					
FY 2000																					
FY 2001																					
FY 2002																					
FY 2003															2						2
Remarks:																					
Installation costs are included within the hardware contract and cannot be broken out.	ırdware cor	itract ar	nd canno	of be bro	ken out																

	INDIVIDUAL MODIFICATION		Date February 1997
MODIFICATION TITLE:	Tank Driver Trainer Mod (M1A2 SEP Upgrade) TBD3	3	
MODELS OF SYSTEMS AFFECTED:	M1A1 Tank Driver Trainer		
DESCRIPTION / JUSTIFICATION:			
The Tank Driver Trainer (TDT simulated environments, terral M1A2 driver's compartment ar Armor School to match project	The Tank Driver Trainer (TDT) simulates actual tank performance for beginner and transitioning drivers. It provides a range of motion and simulated environments, terrain and situations which are difficult or impossible for the driver to experience in normal training or operations. The M1A2 driver's compartment and tasks are significantly different from the M1A1. This project upgrades existing M1A1 Tank Driver Trainers at the Armor School to match projected throughput of students as more M1A2s enter the field.	transitioning drivers. It provic te driver to experience in norr s project upgrades existing M eld.	des a range of motion and mal training or operations. The 11A1 Tank Driver Trainers at the
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	VELOPMENT MILESTONES:		
Preliminary Design Review:	 		ACCOMPLISHED
Critical Design Review:		N/A	
Contractor Test and Evaluation:	uation:	3Q00	
Development Test and Evaluation:	valuation:	N/A	
Inital Operational Test and Evaluation:	d Evaluation:	4Q00	
IPR Production Decision		N/A	
TDP Available:		N/A	

				INDIVIDU	AL MO	INDIVIDUAL MODIFICATION	NC						Date		Ŧ,	February 1997		П
MODIFICATION TITLE (Cont):	T	Tank Driver Trainer Mod (M1A2 SEP Upgrade) TBD3	Trair	er Mod	(M1A;	2 SEP (Jpgrad	le) TB[33									
FINANCIAL PLAN: (\$ in Millions)	EV 4006																	
	and Prior	FY 1997	F	FY 1998	F	FY 1999	FY 2000	100	FY 2001	2	FY 2002	F	FY 2003		TC	T	TOTAL	
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RDT&E																		-
PROCUREMENT	· · · · · ·																	
Kit Quantity								_		_				-				
Installation Kits						1.5	-	1.5					<u>-</u>	9.0			ဗ	3.6
Installation Kits Nonrecurring						2.5												2.5
Equipment	-														············			
Equipment Nonrecurring																		
Engineering Change Orders																		
Data																		
Training Equipment	<u></u>				_				-									
Support Equipment																		
Other																		
Interim Contractor Support																		
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Installation of Hardware																		
FY 1996 & Prior Eqpt Kits																		
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FY 1998 Eqpt Kits										-								
FY 1999 Eqpt Kits																		
FY 2000 Eqpt kits																		
FY 2001 Eqpt kits																		
FY 2002 Eqpt kits																		
FY 2003 Eqpt kits													-					
(FY(TC) Eqpt (xx kits)			_					+	\dashv			_	\perp			-	\dashv	
Total Installation Cost			_					1				-		4			_	İ
Total Procurement Cost			\dashv		\dashv	4.0		1.5		-	-	\downarrow		0.6	-		_	6.1
METHOD OF IMPLEMENTATION:	••		ΑĐ	MINISTR/	ATIVE LI	ADMINISTRATIVE LEADTIME:	ňi.	9	Months	<u>α</u> .	PRODUCTION LEADTIME:	ON LEAL	DTIME :	18	Months	şt		
Contract Dates:		37:			FY 1998:	.98:				щ	FY 1999:		Mar 99					
Delivery Date:	FY 1997:	77:			FY 1998:	:86:				۳	FY 1999:		Sep 01	_				\Box





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	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	Close Combat Tactical Trainer (CCTT)/SEP Mod TBD4)4	
MODELS OF SYSTEMS AFFECTED:	Close Combat Tactical Trainer (CCTT)		
DESCRIPTION / JUSTIFICATION:			
AR 350-38 requires Program Manager to program modifications to the system they support. This fur SEP changes to the M1A2.		and budget funds to support changes to fielded training devices resulting from changes or iding will modify existing Close Combat Tactical Trainer modules to represent the most rec	ing from changes or present the most recent
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:			
Examples Preliminary Design Review:		3Q01 ACCOMPLISHED	SHED
Critical Design Review:		4001	
Contractor Test and Evaluation:	iluation:	3002	
Development Test and Evaluation:	valuation:	3002	
Inital Operational Test and Evaluation:	nd Evaluation:	4002	
IPR Production Decision		4002	
TDP Available:		4002	

)													•		
MODIFICATION TITLE (Cont):		ᄗ	ose C	omba	Close Combat Tactical Trainer (CCTT)/SEP Mod TBD4	cal Tr	ainer (ССТТ	/SEP	Mod 7	BD4									
FINANCIAL PLAN: (\$ in Millions)	FY 1996	96																		
	and Prior	٦ġ	FY 1997	266	FY 1998	866	FY 1999	666	FY 2000	000	FY 2001	٥	FY 2002	202	FY 2003	03	TC		TOTAL	AL
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RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits											• • • • • • • • • • • • • • • • • • • •		4	2.7	8	2.5	57	2.7	34	7.5
Installation Kits Nonrecurring										0.2		1.8			···					2.0
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data						,														
Training Equipment																				
Support Equipment															•					
Other										-		_	.,							
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eapt Kits													-					-		
FY 1997 Eapt Kits																				
FY 1998 Eqpt Kits												-								
FY 1999 Eqpt Kits						•														
FY 2000 Eqpt Kits																				
FY 2001 Eqpt Kits																	-			
FY 2002 Eqpt Kits																				
FY 2003 Eqpt Kits											•									
(FY(TC) Eqpt (xx kits)															•					
Total Installation Cost																-				
Total Procurement Cost		H								0.2		1.8		2.7	H	2.5		2.7		9.6
METHOD OF IMPLEMENTATION: Contractor Contract Dates:	Contract	ictor FY 1997:			ADMINISTRATIVE LEADTIME: FY 1998:	STRAT	IVE LEAI FY 1998:	DTIME:		9	Months	ŒĹ	PRODUC FY 1999:	CTION	PRODUCTION LEADTIME: FY 1999:	ΑË:	15 M	Months		
Daliyary Data:	Ú	1001																		

Exhibit P-3a Individua

Installation Schedule: Close	Close Combat Tactical Trainer (CCTT)/SEP Mod TBD4	actic	al Tra	iner (E	/SEP	Mod	rBD4					٥	Date		Februs	February 1997						
19	FY 1997	_		, 	FY 1998			Ŧ	FY 1999			FY 2000	8			FY 2001	_						
& Prior 1	СI	ි ල	4		SI (SI	41	+1	€	က	41	-	01	ଚ	41	-	CJ	m m	41				A	Total
Inputs																							
FY 1996 & Prior																							
FY 1997																							
FY 1998																							
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Outputs																							
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FY 1997																							
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	FY 2000			F	FY 2001			FY 2002	202			FY 2003	_		Ĺ	FY 2004			Ţ	FY 2005			
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FY 2003											80												8
91184116					ŕ																		
2000 XI																							
FY 2001																							
FY 2002										14													14
FY 2003														8				•					8
Remarks:																							
Installation costs are included within the hardware contract and cannot be broken out.	thin the hardw	are cor	ıtract ar	id cann	ot be bi	roken ot	-																

	INDIVIDUAL MODIFICATION Date	February 1997
MODIFICATION TITLE:	Maintenance Training System (MTS) SEP Mod TBD5	
MODELS OF SYSTEMS AFFECTED:	M1A2 Maintenance Trainers	
DESCRIPTION / JUSTIFICATION:		
AR 350-38 requires Program N modifications to the system the SEP changes to the M1A2.	AR 350-38 requires Program Managers to program and budget funds to support changes to fielded training devices resulting from changes or modifications to the system they support. This funding will modify existing M1A2 Maintenance Training Systems to represent the most recent SEP changes to the M1A2.	m changes or le most recent

DEVEL OBMENT CTATILE	CHANGE DEVELOPMENT AND POSTORING.		
Examples	DEVELOTWENT STATUS / MAJOR DEVELOTWENT MILESTONES: Examples	GENERAL GENERA	ŗ
	Preliminary Design Review:		<u>.</u>
Critical De	Critical Design Review:	3Q01	
Contractor	Contractor Test and Evaluation:	3001	
Developme	Development Test and Evaluation:	3001	
Inital Opera	Inital Operational Test and Evaluation:	4001	
IPR Produ	IPR Production Decision	4α01	
TDP Available:	able;	4001	

fication

Exhibit P-3a Individua

				Ž	JIVIDUA	IL MOD	INDIVIDUAL MODIFICATION	NO						Date			February 1997	, 1997	
MODIFICATION TITLE (Cont):	2	Maintenance T	nance		ng Sy	stem (raining System (MTS) SEP Mod TBD5	SEP M	lod TB	05									
FINANCIAL PLAN: (\$ in Millions)		_																	
	FY 1996 and Prior	Ę.	FY 1997	占	FY 1998	FY	FY 1999	FY 2000	000	FY 2001	10	FY 2002	22	FY 2003	3	TC		TOTAL	AL
	City \$	Qţ	\$	ð	ક	ਲੇ	\$	δ	s	Š	69	σţ	\$	Qţ	\$	Ωţλ	€	ģ	₽
RDT&E																			
PROCUREMENT																			
Kit Quantity																			
Installation Kits										34	1.0							34	1.0
Installation Kits Nonrecurring									0.3		0.8								Ξ
Equipment															-				
Equipment Nonrecurring	-																		
Engineering Change Orders																			
Data																			
Training Equipment											_	**		 .					
Support Equipment																			
Other														-		, . 			
Interim Contractor Support																	·		
																			
Installation of Hardware																			
FY 1996 & Prior Eapt Kits						_										,	-		
FY 1997 Eqpt Kits	,																		
FY 1998 Eqpt Kits																			
FY 1999 Eqpt Kits			···												. •				
FY 2000 Eqpt Kits																 -			
FY 2001 Eqpt Kits			-,																
FY 2002 Eqpt Kits					_														
FY 2003 Eqpt Kits				······											ň				
(FY(TC) Eqpt (xx kits)											1	1					1		
Total Installation Cost												1	\dashv	+		1		\uparrow	
Total Procurement Cost						╛			0.3		1.8			-	\dashv	\dashv	1		2.1
METHOD OF IMPLEMENTATION: Contractor	V: Contractor	ļ		ADMI	NISTRA	TIVE LE	ADMINISTRATIVE LEADTIME:	ůί	9	Months	_ •	PRODUCTION LEADTIME:	TION	EADTIN		15 M	Months		
Contract Dates:	FY 1997: FY 1997:	97: 77:				FY 1998: FY 1998:						FY 1999: FY 1999:							
Delivery Date:																			

FY 1997 FY 1998 FY 1999

Inputs

FY 2000

Inputs

FY 2001 FY 2002 FY 2003

Outputs FY 2000 FY 2001 FY 2002 FY 2003 Item No. 1 Page 30 of 30



							DATE				
	6	BUDGET ITEM JUST		IFICATION SHEET	<u> </u>			Februa	February 1997		
APPROPRIATION / BUDGET ACTIVITY	VITY				P-1 ITEM NOMENCLATURE	LATURE					
PROCUREMEN	JT OF WPNS & TRKI	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat	ked Combat Vehicles				u	BRADLEY BASE SUSTAINMENT (G80718)	STAINMENT (G8071	. (8	
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	414	102	80	18	78	122	154	128	131	936	2163
COST (in millions)	456.2	133.9	234.8	125.6	342.4	370.0	452.3	376.2	388.9	2782.9	5663.2
Initial Spares (in millions)	12.5	5.2	6.3	0.3	1.5	1.9	1.4	4.1	4.1	57.2	97.5
Total (in millions)	468.7	139.1	244.1	125.9	343.9	371.9	453.7	380.3	393.0	2840.1	5760.7
Unit Cost (in millions)	1.1	1.4	3.1	7.0	4.4	3.0	2.9	3.0	3.0	3.0	2.7

Bradley Fighting Vehicle will facilitate enhanced command and control, provide greater lethality, provide mobile protected transport of an infantry squad to critical points on the battlefield, and perform cavalry scout and other claimant missions in the 21 st century. Upgrades in this program include advanced DESCRIPTION: The Bradley Base Sustainment Program initiated a program to upgrade first generation Bradleys(A0) into the A2 configuration and bridge technology in the areas of command and control, lethality, survivability, and sustainability required to defeat current and future threat forces while the production gap until the introduction of the A3 upgrade vehicles. FY98 marks the second production year of the A3 configuration. The upgraded A3 remaining operationally compatible with the main battle tank.

communications and target acquisition upgrades required to fight as a member of the combined arms team. These vehicles will be remanufactrued in the JUSTIFICATION: The FY98 Budget will provide the second year of LRIP for the A3 upgrade program. The M2A3 upgrade program will provide digital prime contractor's plant to preserve the critical skills and vendor base to allow for future modernization.

Quantities are all A0-A2's in FY96 and prior, 45 A0-A2 Linebackers and 35 A2-A3's in FY97, and A3's thereafter.

Exhibit P-40R

Budget Item Justification Sheet

	Ì	A. APPN / BUDGET ACTIVITY TITLE/NO	T ACTIVITY	TITLE/NO		B. WEAPO	z	B. WEAPON	Г	C. MANUFACTURER NAME	RER NAME	D. DATE	
WICV COST Analysis		PHOCOMEME	Tracked Co	NS & LHKD CA ambat Vehicles	IBT VEHS / 1 /	BRADL	EY BASE SUS	TAINMENT (GB	10718)			Febru	February 1997
WTCV	Ω		FY 96	FY 96		FY 97			FY 98			FY 99	
Cost Elements	8	TotalCost	ð	UnitCost	-	Qŧ	UnitCost	TotalCost	Qty	UnitCost	TotalCost		UnitCost
BRADLEY BASE SUSTAINMENT (MOAD)		\$000	Each	\$000	\$000	Each	000\$	000\$	Each	000\$	000\$	Each	\$000
BRADLEY BASE SUSTAINMENT (M2A3)		1 3 3 8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		1275	172296	S	4923	118325	8	6574	328409		4210
IOIAL	┪		$\frac{1}{2}$	1		1		1	1				

	È	A. APPN / BUDGET ACTIVITY TITLE/NO	r ACTIVITY	TITLE/NO		B. WEAPON	z	J	ľ	C. MANÜFACTURER NAME		D. DATE	
WTCV Cost Analysis	-	PROCUREME	AT OF WPI	NS & TRKD CI	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 /	BHAD	EY BASE SUS	BRADLEY BASE SUSTAINMENT (M2A2/)	2A2)			Febr	February 1997
WTCV	₽		FY 96	FY 96		FY 97	(580716)	(16)	FY 98			FY 99	
ents	8	TotalCost	Q.	UnitCost	TotalCost	QÎ	UnitCost	TotalCost	Q. Q.	UnitCost	TotalCost	Qty	UnitCost
	Ħ	000\$	Each	000\$	000\$	Each	000\$	\$000	Each	000\$	000\$	Each	\$000
1. VEHICLE 2. T2SS		61559 9609	105	586 128	23059		512					· · · · · · · · · · · · · · · · · · ·	
3. Engine 4. Track		4965 1935	105 105	47	2250 829	45 45	50 18						
5. Other GFE (Buy) 6. Other GFE (Reman)		7567 10926	105 105	104	2620 4992		58					•	
7. STINGER Kits					17270		186						
SUBTOTAL		96561			51020								
8. Govt Test & Eval 9. Engineering-Contractor		651 16093 4303			3280			4100			1880 4420		
11. Project Management Admin 12. Fielding 13. Reimbursable Matrix Supt		1754 6965 1933			7478	·		3166			7714		
SUBTOTAL		31699			10758			7266			14014		
13. PSE		2609			200								
TOTAL		133869			62478			7266			14014		
			· · · · · · · · · · · · · · · · · · ·										
						,							

BUDGET PRO	BUDGET PROCUREMENT HISTORY AND	PLANN	RY AND PLANNING EXHIBIT (P-5A)					DATE	Eohnian 1007	
B. APPROPRIATION / BUDGET ACTIVITY					C. P-1 ITEM N	C. P-1 ITEM NOMENCLATURE	T T		on (man	T
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / 1	& TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	bat Vehicles				RADLEY BAS	BRADLEY BASE SUSTAINMENT (M2A2/) (G80716)	(M2A2/) (G	90716)	
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	OTV Each	UNIT COST	SPECS AVAIL NOW	SPEC IF Y REV REO'D	IF YES W/A
1. VEHICLE FY XX FY 96 FY 97	UDLP, York PA	SS/FFP TACOM	TACOM	Jan-96 Apr-97	May-97 Jun-98	105 45	586 512	+	9 9 9 0	
2. T2SS FY XX FY 96	HAC, LaGrange GA	SS/FFP	АМСОМ	Feb-96	Mar-97	75	128	YES	<u> </u>	
3. Engine FY XX FY 96 FY 97	Cummins, Columbus, iN	SS/FFP	TACOM	Jan-96 Apr-97	Mar-96 Feb-98	105	47	YES	<u> </u>	
4. Track FY XX FY 96 FY 97	Goodyear, Akron OH TBD	C/FFP	TACOM	Feb-96 Apr-97	Feb-97 Feb-98	105	8 8	YES	0 0 2 0	
					1901-1-1					
REMARKS:										



				L		P-1 ITEM NOMENCLATURE BRAF	NOME	VCLAT	URE	EY BAS	SE SU	TAIN	ENT	MZAZ	(G80	95	İ		DATE	ш		Febru	February 1997	266	ŀ		
DATE OF THE PROPERTY OF THE PR	7	1	PROC	ACCEP.	BAL				Fiscal Year 96	al Ye	ar 96				卜	1		İ	F	Fiscal Year 97	Year	16				H	
2	_		_		DUE						Ca	Calendar Year 96	r Ye	ar 96				Н		ပ	alenc	lar Y	Calendar Year 97	7		П	⋖
COST ELEMENTS	<u>.</u>	-	E Each N	1 oct	ASOF 1 OCT	z 0 > 0 ∪ ⊢	υшО	¬ ∢ Z	тпю	≽ κ α κ σ α	≥ < ≻	っ ⊃ Z	רםי	∢ ⊃ ต	Sησ	0 D F	z 0 >	_ A N	T M B	Σ < Œ	< σ α	∑ < ≻	フコ Ζ	707	∢ ⊃ ত	ωше	- ш «
1. VEHICLE	92 8	95 & Pr	A 355	80	275	11 10	8	10	0	10	10 10	의	2	10	£	2	10	9	2	10	10	٥	₽	₽	2	9	37
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	FY 97	97	A 45	0	45						_						\dashv	┥	_		∢		7	\dashv	\dashv	4	45
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							\downarrow		1	\dashv	\dashv	4	\perp		T	†	+	+	4				1	\dagger	+	+	
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			TotalCost	\$000	147645 65474 51566 4921	269606	12897 27901 1824 2249 2095 46966	2095 9742	328409			
C. MANUFACTURER NAME			UnitCost	\$000	2016 943 676 62	3697						
Г	2A3)	FY 98	Qty	Each	81 81 81 81 81 81	18						
	BRADLEY BASE SUSTAINMENT (M2A3) (G80717)		TotalCost	\$000	36280 16974 12171 1112	66537	9526 25549 1786 2202 2640 41703	2200 7885	118325			
Z	LEY BASE SUSTAI (G80717)		UnitCost	000\$	1879 986 1075	3989		50				
B. WEAPON	внар	FY 97	Qfy	Each	35 35	32		160			 	
	PHOCUREMENT OF WPNS & THKD CMB1 VEHS / 1 / Tracked Combat Vehicles		TotalCost	000\$	65779 34512 37629 1683	139603	8411 6981 1600 1973 1082	8038	172296			
Y TITLE/NO	NT OF WPNS & THKD CA Tracked Combat Yehicles		UnitCost	000\$								
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	WTCV Cost Analysis	WTCV	Cost Elements		1. Vehicle 2. IBAS 3. FLIR 4. Other GFE	SUBTOTAL	 Engineering-Government Engineering-Contractor Project Management Administration Reimbursable Matrix Support Test and Evaluation SUBTOTAL	10.Cummins Engine Life-of-Type (LOT) Buy 11.Peculiar Support Equipment 12.Fielding	TOTAL			

BUDGET PRO	BUDGET PROCUBEMENT HISTORY AND	PI ANNI	BY AND PI ANNING EXHIBIT (P-5A)					DATE		
B. APPROPRIATION / BUDGET ACTIVITY					C. P.1 ITEM N	C. P-1 ITEM NOMENCI ATURE		Ē.	reordary 1997	T
PROCUREMENT OF WPNS	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	bat Vehicles				BRADLEY BA	BRADLEY BASE SUSTAINMENT (M2A3) (G80717)	(M2A3) (G	30717)	
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST	ΩTY	UNIT COST	SPECS	SPEC IF	IF YES W/A
1. Vehicle FY XX FY 97 FY 98 FY 99	UDLP YORK PA	SS/FFP	ТАСОМ	Jun-97 May-98 Dec-98	Oct-98 Jun-99 May-00	35 18 78	1879 2016 1893		999	
2. IBAS FY XX FY 97 FY 98 FY 99	TEXAS INSTRUMENTS DALLAS TEXAS; HAC GEORGIA	C/FFP	МІСОМ	Jul-97 Jun-98 Jan-99	Jul-98 Mar-99 Feb-00	35 18 78	986 943 839	YES YES YES	999	
3. FLIR FY XX FY 97 FY 98 FY 99	TEXAS INSTRUMENTS DALLAS TEXAS	SS/FFP	NVL	Mar-97 Jan-98 Jan-99	Apr-98 Jan-99 Dec-99	35 18 78	1075 676 661	YES YES YES	0 0 0 2 2 2	
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REMARKS:										





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	CODE "B" ITEM DES	EM DESCRIPTION		February 1997	REPOR	REPORT CONTROL SYMBOL DD-COMP(AR)1092	BOL
APPROPRIATION		АСПИІТУ	P-1 ITEM NOMENCLATURE	CLATURE			
2	2040	Tracked Combat Vehicles	:	BRADLEY B	BRADLEY BASE SUSTAINMENT (G80718)	IT (G80718)	
1. CURRENT DEVELOPMENT AND TEST STATUS	TEST STATUS						
					SCHEDULE DATE		
			CURRENT	LAST RPTD	RE	REASON FOR DELAY*	
			(1)	(2)		(3)	
a. DEV TEST & EVAL (DT&E)		PLAN / ACTUAL	Oct-97	Oct-97			
b. INITIAL OPER TEST & EVAL (IOT&E)	œE)	PLAN / ACTUAL	Mar-99	Mar-99	-		
c. OPER TEST & EVAL (OT&E)		PLAN / ACTUAL	V/A	N/A			
d. AVAIL DATE OF TECH DATA PKG (TDP)	I (TDP)		Nov-99	Nov-99			
OR PERFORMANCE SPECIFICATIONS	SNOI						
2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE	L FOR SERVICE USE	4000					
3. EQUIPMENT ITEM(S) TO BE REPLACED M2A2/M3A2	LACED						
4. EXTENT OF IMPROVEMENT OVER ITEM(S) O LETAHALITY, COMAND & CONTROL	4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT TO BE REPLACED LETAHALITY, COMAND &CONTROL	PLACED					
5. DEVELOPMENT CONTRACT INFORMATION	DRMATION						
CONTRACTOR NAME (1)	PLANT LOCATION (2)	COMPONENT (3)	THROUGH 1996 (4)	1997	1998	1999	BEYOND BYS
UDLP	YORK, PA	INTEGRATION	165234.0	56086.0	43900.0	14600.0	(6)
TEXAS INSTRUMENTS	MCKINNEY, TEXAS	IBAS	53344.0	7754.0	1100.0		
	GOVERNMENT	N/A	35028.0	18763.0	18039.0	10245.0	2020.0
	IESI	N/A	302.0	5150.0	6455.0	9144.0	
				N .			
TOTAL DOTOE CLINDING							
IOIAL HDIGE FUNDING			253908.0	87753.0	69494.0	33989.0	2020.0
6. REMARKS							

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	BUD	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	YIIVI			P-1 ITEM NOMENCLATURE	E			
PROCUREME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat	IT VEHS /Tracked Combat \	t Vehicles			BRADLEY FVS TRAINII	BRADLEY FVS TRAINING DEVICES (G20900)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	0.0	9.0	1.4	9.6	21.1	13.3	4.8	3.4

DESCRIPTION:

- visibility. The training objectives of AGTS are target acquisition, identification, and engagement IAW established tactical doctrine and procedures. The AGTS is against mobile and stationary targets, and single and multiple target arrays in a realistic battlefield environment during daylight, at night, and reduced 1. The Advanced Gunnery Training (AGTS) training objective is proficiency in the use of primary and alternate fire control and sighting equipment
- a. Permanent (PAGTS)--used to support institutional training.
- b. Mobile (MAGTS)--used to support unit training. Is deployable anywhere in the world.
- 2. Hands On Turrent Trainer (HOTT) is a stand alone maintenance trainer used to support institutional training. It replicates an actual Bradley Turret allowing maintainers to trouble shoot, fault isolate, and repair over 100 induced faults.
- 3. Turret Diagnostic/Troubleshooter is a virtual reality desk top trainer used to suport institutional training. It is designed to support turret related operational repair and alignment skills for proper maintenance.
- 4. Hull Diagnostic/Troubleshooter is a virtual reality desk top trainer used to support institutional training. It is designed to support turret related operational repair and alignment skills for proper maintenance.
 - 5. Upgrade of Precision Gunnery System (PGS). This currently fielded non-system training device (NSTD) is not compatible on the M2A3/M3A3 Bradley Fighting Vehicle.
 - 6. Upgrade of Thru-Sight Video (TSV). This currently fielded NSTD is not compatible on the M2A3/M3A3 Bradley Fighting Vehicle.
 - 7. Upgrade of MILES 2000. This currently fielded NSTD is not compatible on the M2A3/M3A3 Bradley Fightly Vehicle
 - Upgrade MILES SAWE. This currently fielded NSTD is not compatible on the M2A3/M3A3 Bradley Fighting Vehicle.
- facility were positioned in an M2A2 configuration. The CCTT simulators at specific installation must be upgraded to reflect the vehicles on that 9. Upgrade of Close Combat Tactical (CCTT). CCTT is a combined arms simulation trainer. The currently fielded NSTD simulators at each
- 10. Bradley Desktop Trainer (BDT) is a desktop computer designed to support individual and networked unit training. The computer replicates the interior turret operation of the Bradley vehicle. It provides hands on training of the commanders computer.

JUSTIFICATION:

the operational use of the vehicle. The goal of training devices is to provide cost effective training to the soldiers without sacrificing realism. This training equipment training, and restriction on the availability of suitable training areas will drastically reduce the capability to provide effective, realistic training on the BFVS through redesign of existing training equipment. The rising cost of fuel, ammunition, repair parts, environmental restrictions, vehicles used exclusively for Introduction of the more technologically advanced Infantry Fighting Vehicle and Cavalry Fighting Vehicles into the Army inventory necessitates a will be part of an overall training package which will be used to replicate or substitute for actual vehicle use. Budget Item Justification Sheet

		A. APPN / BUDGET ACTIVITY TITLE/NO	GET ACTIVI	TY TITLE/NO		B. WEAPON	NO		г	C. MANÜFACTURER NAME	JRER NAME	D. DATE	
WICV COST Analysis	٠	PHOCURE	MENIOF V	ENTOF WPNS & TRKD CA Tracked Combat Vehicles	PHOCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	/ BRADL	EY FVS TRAIN	BRADLEY FVS TRAINING DEVICES (G20900)				Febr	February 1997
WTCV	Q		FY 96			FY 97			FY 98			EV 80	
Cost Elements	8	TotalCost	\dashv		TotalCost	Qty	UnitCost	TotalCost	Ą	UnitCost	TotalCost		UnitCost
	ŀ	\$000	Each	\$000	000\$	Each	\$000	\$000	Each	\$000	\$000	Each	\$000\$
1.ADVANCED GUNNERY TRAINING SYS a. Production b. Government Engineering	⋖										3660 360	L	1220
SUBTOTAL											4020		
2. MAINTENANCE TRAINERS a. HOTTS b. Hull D/7 c. Turret DTt d. Government Engineering					550	-	550	672 290 400 55	- v v	672 58 80	1629 290 400 110	വവത	543 58 80
SUBTOTAL					572			1417			2429		
3. PRECISION GUNNERY SYSTEM a. Production b. Government Engineerig											43		
SUBTOTAL											643		
MILES 2000 a. Production b. Government Engineering SUBTOTAL											352 45	44	8
BDT a. Production b. Government Engineering SUBTOTAL	·										2592 63	છ	27
TOTAL					572			1417			9544		
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exhibit P-5A Procurement	History and Planning
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BUDGET PRO	BUDGET PROCUREMENT HISTORY AND	PLANN	ORY AND PLANNING EXHIBIT (P-5A)					DATE	February 1997	947
B. APPROPRIATION / BUDGET ACTIVITY					C. P-1 ITEM N	C. P-1 ITEM NOMENCLATURE	RE			
PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1	S & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	bat Vehicles				BRADLEY F	BRADLEY FVS TRAINING DEVICES (G20900)	ICES (G2	(0060	
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	ΩTY	UNIT COST \$000	SPECS AVAIL NOW	SPEC REC REC	F YES W/A
1.ADVANCED GUNNERY TRAINING SYS FY 99	Lockheed Martin, Orlando, FL	FFP	STRICOM	Oct-98	Aug-00	၉	1220	N A	N/A	N/A
2. MAINTENANCE TRAINERS										
а. нотт										
FY 97	Contraves, Tampa, FL	FFP	STRICOM		May-99	_	550	A/A	A A	۷ X
FY 98	Contraves, Tampa, FL	HP.	STRICOM	Nov-97	May-00	-	672	Ϋ́	¥ N	¥ N
FY 99	Contraves, Tampa, FL	FFP	STRICOM	Nov-98	oo-unc	က	543	¥ Ž	¥ Ž	¥ Z
b. Hull D/T	Ē	į		_				;	-	
FY 98	Contraves, Tampa, FL	FFP	STRICOM		May-99	Ω.	28	ĕ Z	ĕ Ž	¥ :
FY 99	Contraves, Tampa, FL	FFP	STRICOM	86-voN	May-00	വ	58	¥ Ž	¥ Ž	ĕ Z
c. Turret D/T			,							
FY 98	Contraves, Tampa, FL	FFP	STRICOM		May-99	-CJ	80	¥ X	× ×	Α/N
FY99	Contraves, Tampa, FL	FFP	STRICOM	Nov-98	May-00	LC.	88	¥ X	¥ Z	¥ X
4. MILES 2000 FY99	Cubic Defense, San Diego CA	FFP	STRICOM	Dec-98	Aug-00	44	гO	N/A	Ą Z	N/A
5. BDT	4								:	
FY99	UDLP	1	STRICOM	86-you	Aug-00	96	27	ĕ Z	ĕ Ž	∢ Ž
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REMARKS:										
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	BNB	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	IEET			Fehruary 1997		
APPROPRIATION / BLIDGET ACTIVITY	VT.W.						ecidai) iss		_
OV Japana (No. 1921)				P-1 ITEM NOMENCLATURE	ш				
PROCUREME	UT OF WPNS & TRKD CMB	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	Vehicles		HEA	HEAVY ASSAULT BRIDGE (HAB) TRAINING DEVICES (384600)) TRAINING DEVICES (GR	18001	
							20) 2011-0111111111111111111111111111111111	(ana)	
	FY 1996	FY 1997	FY 1998	FY 1999	EV 2000	EV 2004	2000	0000	
VIIANITITY					2007	1 1 2001	LT 2002	FY 2003	
COMMITT					LC;				
Constilling all Tool									
COST (III IIIIIIIIII)				0.4	15.8	4.0	Ŧ		
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evolve into a future unit collective training system (mid to far term) implementation. Five institutional operator simulator systems will be located and housed at Ft. Leonard Wood to accomplish Advanced Individual Training (AIT) for the Military Occupational Specialty (MOS) 12B Combat Engineer launch and retrieve the bridge) - day/night and in all weather/environmental conditions. Each simulator system will have the capability to train two DESCRIPTION: The Wolverine (Heavy Assault Bridge) simulator is an institutional operator training system (near term implementation) and will on Wolverine driver/operator mission functions. Mission functions will include, driving the vehicle and conducting gap crossing operations (e.g. Wolverine crews (4 MOS 12Fs) concurrently. The average student throughput is approximately 208.

JUSTIFICATION: The simulators will optimize training effectiveness at reduced institutional OPTEMPO costs and will minimize environmental impact to the installation.

Budget Item Justiff

WTCV Cost Analysis	<u>* </u>	A. APPN/BUDG PROCUREMI	ENT OF W	Y TITLE/NO PNS & TRKD Combat Vehic	A. APPN / BUDGET ACTIVITY TITLENO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vahidas	9. WE	ON IB TRAINING D	APON HAB TRAINING DEVICES (G84600)	(00)	C. MANUFACTURER NAME N/A	TURER NAME N/A	D. DATE Febr	rte February 1997
) A STW	₽		FY 96	FY 96	8	FY 97			FY 98			FY 99	
ents	8	TotalCost	Qŧ	UnitCost	TotalCost	₹	UnitCost	TotalCost	ð	UnitCost	TotalCost	ĝ	UnitCost
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	BUL	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	IEET			Februa	February 1997
APPROPRIATION / BUDGET ACTIVITY	YTIVITY			P-1 ITEM NOMENCLATURE	<u> </u>			
PROCUREME	NT OF WPNS & TRKD CME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	Vehicles		BRADLE	BRADLEY FVS TRAINING DEVICES (MOD) (GZ2500)	DEVICES (MOD)	(GZ2500)
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	EV 2003
QUANTITY								0007
COST (in millions)	1.8	6.0	0.0	2.1	4.6	4.9	0.0	0.0

DESCRIPTION: (1) The Conduct of Fire Trainers(COFT) for the Bradley Fighting Vehicle provide training in target acquisition identification and package which is used to simulate or substitute for actual vehicle use. (2) The requirement to upgrade a specified number (30) of M2A1/M3AI engagement using primary, secondary, and auxiliary fire control and sighting equipment. This training equipment is part of an overall training COFTS to replicate the M2A2/M3A2ODS configuration was the result of Operation Desert Storm. (3) Software Upgrades to Bradley Training to Bradley Training Devices to M2/M3A1 COFTs, ODS COFTs, PGS, CCTT, AGTS, Bradley Desktop Trainer.

The intended sites for the M2/M3A1 Conduct of Fire Trainers (COFTs) by converting fifteen (15) M60A3 Mobile Conduct of Fire Trainers (M-COFTs) to M2/M3A1 M-COFTs and two (2) M60A3 Unit of Fire Trainers (U-COFTs) to M2/M3A1 U-COFTs are listed below.

3-161 IN (81 SMB)	1-120 IN (30 SMB)	278 ACR
1-118 IN (218 SMB)	1-167 IN (31 SAB)	2-121 IN (48 SMB)
1-163 IN (116 SAB)	1-124 CAV (49 AD)	E131 CAV (11 ACR)
2-136 IN (MN-STARC)	1-141 IN (49 AD)	
2-278 ACS (278 ACR)	2-141 IN (49 AD)	
3-278 ACS (278 ACR)	3-144 IN (49 AD	
1-119 IN (30 SMB)	CAMP SHEI BYTC	

requirements. (3) Software updates will be required of training devices. Training devices now function based on software. As a system is upgraded/ JUSTIFICATION: (1) Conversion of fifteen (15) M60A3 M-COFTS to M2A1/M3A1 M-COFTS and two (2) M60A3 U-COFTs to M2/M3A1 U-COFTs; (2) M2A2/M3A2 Bradley Fighting Vehicle COFT Operation Desert Storm Enhancement Program are required to meet Army's new force structure modified, software on the training device must be modified to ensure no negative training for the soldier.

The average soldier sustainment throughput per year is approximately 3,600 for the BFV Commanders and Gunners in the units who will be receiving training on these COFTS.





DATE	February 1997		BRADLEY FVS TRAINING DEVICES (MOD) (GZ2500)	
	BUDGET ITEM JUSTIFICATION SHEET	APPROPRIATION / BUDGET ACTIVITY	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	

FY 2003	0.0	0.0	0.0	0.0						
FY 2002	0:0	0.0	0.0	0.0						
FY2001	0.0	0.0	4.9	4.9						
FY 2000	0.0	0.0	4.6	4.6						
FY 1999	0.0	0.0	2.1	2.1						
FY 1998	0.0	0.0	0.0	0.0						Att
FY 1997	NC	SEMENT 0.0	6.0	0.9						
Description FY	M-COFT CONVERSION	ODS COFT ENHANCEMENT 8.6 0.0	Software Upgrades 0.0	15.7						
OSIP No.	1-93-05-4429	1-96-05-4509 Operational	1-96-05-4513 Operational	Totals						

		MODIFIC	SATIONI	NSTALL/	MODIFICATION INSTALLATION SUMMARY Date	MMARY	Date		
							Š	September 1996	1996
			(TOA, D	ollars in	(TOA, Dollars in Millions)				
	ձ								
System/Modification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY2001	FY 2002	FY 2003	TOTAL
No P3a Set for modification BRADLEY FVS TRAINING DEVICES (MOD)									
M-COFT CONVERSION	0.0	0.0		0.0		0.0		0.0	0.0
ODS COFT ENHANCEMENT	4.3	0.0	0.0	0.0	0.0	0.0	0.0		4.3
Software Upgrades	0.0	0.0		0.0		0.0			0.0
Totals	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3
NOTE: INSTALLATION COST IS NOT SEPARATELY IDENTIFIED ON THE CONTRACT. THEREFORE, P3N NOT APPLICABLE		_							

	INDIVIDUAL MODIFICATION		Date	September 1996
MODIFICATION TITLE:	M-COFT CONVERSION 1-93-05-4429			
MODELS OF SYSTEMS AFFECTED:	M2/M3AI M-COFTS			
DESCRIPTION / JUSTIFICATION:				
The conversion is required to provide the number	rovide the number of M2AI/M3A1 M-COFTS identified by the latest force structure.	ified by the latest force struc	ture.	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	ELOPMENT MILESTONES:	OHNWA I	ACCOMPLISHED	
Lxariptes Preliminary Design Review:		N/A	N/A	
Critical Design Review:		N/A	N/A	
Contractor Test and Evaluation:	ation:	1096	2Q96	
Development Test and Evaluation:	ıluation:	N/A	N/A	
Inital Operational Test and Evaluation:	Evaluation:	1096	2096	
IPR Production Decision		N/A	N/A	
TDP Available:		N/A	N/A	





Installation Schedule:		COFT	M-COFT CONVERSION 1-93-05-4429	/ERS	NO 1	-93-0	15-442	တ			!					Date		Septe	September 1996	1996				
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The enhancement is required to provide the number of M2A1/M3A1 U-COFTS identified by the latest force structure.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	INED	ACCOMPLISHED
Freilminary Design Heview:	30,95	30,95
Critical Design Review:	4095	4Q95
Contractor Test and Evaluation:	2096	2Q96
Development Test and Evaluation:	N/A	N/A
Inital Operational Test and Evaluation:	3096	3Q96
IPR Production Decision	NA	NA
TDP Available:	NA	NA

					INDI	/IDUAL	INDIVIDUAL MODIFICATION	CATION								Date		Septerr	September 1996	
MODIFICATION TITLE (Cont):		SGO	icol	TEN	IHANC	EME	ODS COFT ENHANCEMENT 1-96-05-4509	9-02-4	1509											
FINANCIAL PLAN: (\$ in Millions)		Γ																		
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Support Equipment																				
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Contract Dates:	<u> </u>	FY 1997: EV 4007:		¥ 2 2		_ 4	FY 1998: EV 1008:		ŽŽ	. ◄		_ 4	FY 1999: FV 1999:		Ž	۲ <u>۸</u>				
Delivery Date:	ב	FY 1997:		۲,		-	1 1330.		ا :	$\left[\right]$		-	1 200		<u>-</u>	إ				



cation

Exhibit P3a Individual M

	INDIVIDUAL	INDIVIDUAL MODIFICATION	Date September 1996	1996
MODIFICATION TITLE:	Software Upgrades 1-96-05-4513	113		
MODELS OF SYSTEMS AFFECTED:	M2/M3Al COFTS, ODS COFTS, Precision and Maintenance Training Systems (HOTT).	M2/M3AI COFTS, ODS COFTS, Precision Gunnery System, CCTT, AGTS, Bradley Desktop Trainer, and Maintenance Training Systems (HOTT).	, Bradley Desktop Trainer,	
DESCRIPTION / JUSTIFICATION:				
Software updates will be required of training devi	ed of training devices. Training must be modified to ensure no	Software updates will be required of training devices. Training devices now function based on software. As a system is upgraded/modified, software on the training device must be modified to ensure no negative training for the soldier.	system is upgraded/modifier	ก๋
				-
DEVELOPMENT STATUS / MAJOR DE	/ELOPMENT MILESTONES: NOT A	DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: NOT APPLICABLE FOR SOFTWARE UPGRADES.	ACCOMPLISHED	
Preliminary Design Review:	W.			-

Inital Operational Test and Evaluation:

IPR Production Decision

TDP Available:

Development Test and Evaluation:

Contractor Test and Evaluation:

Critical Design Review:

				2	IVIDUAL	INDIVIDUAL MODIFICATION	-ICATIO	Z						Date		Septem	September 1996	
MODIFICATION TITLE (Cont):		Softwa	Software Upgrades 1-96-05-4513	ades	1-96-0	5-4513	_											
FINANCIAL PLAN: (\$ in Millions)	EV 4006	Г														į		
	and Prior		FY 1997	FY 1998	866	FY 1999	66	FY 2000	-	FY 2001	上	FY 2002	FY 2003	003	Į		TOTAL	Ī
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RDT&E									_									
PROCUREMENT																		
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Installation Kits Nonrecurring																	-	
Equipment									-									
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Engineering Change Orders										***************************************								
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Support Equipment																		
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Interim Contractor Support																		
Installation of Hardware																		
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FY 1997 Eqpt Kits								-										
FY 1998 Eqpt kits																		
FY 1999 Eqpt kits																		
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(FY(TC) Eqpt (xx kits)																		
Total Installation Cost																		
Total Procurement Cost			6.0				2.1	4	4.6	4.9	6							12.5
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Contract Dates: FY 199	iter Metriod FY 1997:	997:	-		TAN S	ADMINISTRATIVE LEAUTIME: FY 1998:	.: ≥	N/A 24	Months	SE.	PHODUC FY 1999:	20 20 9 9	PRODUCTION LEADTIME: FY 1999: N/A	iii Mar	24 N	Months		
Delivery Date:	FY 1997:	397:	N/A		ш	FY 1998:	i	A/N			FY 1999:	6	N/A	Κ.				

Installation Schedule:	s: Software Ungrades 1-96-05-4513	re	narad	es 1-	96-05	-4513										Date		Septe	September 1996	96					
	윤) L	FY 1997			L	FY 1998			Ŧ	FY 1999			FΥ	FY 2000			FY 2001	501						
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Remarks:	KIT INSTALLATION NOT APPLICABLE FOR SOFTWARE UPGRADE.	LATIC	ON NC	r APPL	-ICABL	E FOR	SOFT	WARE	UPGR/	NDE.															

	č	1					DATE				
		BUDGET ITEM JUSTIFICATION SHEET	JUSTIFICA	TION SHEE	-			Febru	February 1997		
APPROPRIATION / BUDGET ACTIVITY	rivity				P-1 ITEM NOMENCLATURE	ENCLATURE					
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	S & TRKD CM	BT VEHS /T	racked Comb	oat Vehicles		ш.	IELD ARTIL	LERY AMML	JUS NOITIN	FIELD ARTILLERY AMMUNITION SUPPORT VEH (G80100)	0100)
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1998 FY 1999	FY 2000	FY 2001	EV 2002	EV 2003	FY 2000 FY 2001 EV 2002 EV 2003 To Complete	Total Draws
QUANTITY	805	48	48				1007	1 5005	2007	and continues	i olai Fiografii
COST (in millions)	408.9	50.0	64.1	0.0	0.0	0.0	0.0	0.0	C		901
Initial Spares (in millions)	1.8							25	25		1.8
Total (in millions)	410.7	50.0	64.1								524 R
Unit Cost (in millions)	0.5	1.0	1.3								0.7.5
DESCRIPTION:											0.0

support the M109 Self-Propelled Howitzer (SPH). The FAASV is capable of transporting a minimum 12,000 pounds of 155mm ammunition over improved, unimproved, and/or cross-country roads. Armor shielding provides necessary ballistic protection. An armored rear door hinges upward and outward to provide the overhead ballistic protection between the FAASV and the Howitzer during loading operations. A conveyor is used for passing prepared projectiles and propellant charges from the FAASV The Field Artillery Support Vehicle (FAASV) is a full tracked armored ammunition vehicle with onboard Ammunition Handling Equipment (AHE). The M992 is used to into the supported Howitzer, Modifications to the rear door, conveyor, and propellant canister racks is incorporated to make the FAASV compatible with the M109A6 Paladin. The FAASV has the mobility equivalent to its supported Self-Propelled Howitzers. The FAASV is designed to operate in all geographical areas and climatic conditions in which the Howitzer operates. The M992A2 was type classified standard in JULY 1994.

JUSTIFICATION

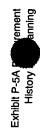
over the current M548, which is being replaced on a one-for-one basis. Thus, high artillery firing rates can be maintained while minimizing casualties. The FAASV has a The Carrier, Ammunition, Tracked (155mm, M992A2) provides a significant Improvement to the Army's offensive ground combat capability. The FAASV provides 100% increase in armor protection for the crew and ammunition, an 80% increase in Ammunition Handling Equipment (AHE) capability and a 50% increase in vehicle mobility ventilated face piece Nuclear, Biological, Chemical(NBC) system, a Simplified Test Equipment - Internal Combustion Engine (STE-ICE), and an Automatic Fire Extinguisher System. The FAASV is a companion vehicle to, and is required to support the M109A6 Self-Propelled Howitzer (SPH). It also preserves a warm mobilization base for the SPH with the only tooled and experienced producer. **Budget Item Justification Sheet**

Exhibit P-40R

		A. APPN / BUDGET ACTIVITY TITLE/NO	TACTIVITY	TITLENO	A. APPN / BUDGET ACTIVITY TITLE/NO	B. WEAPON			г	C. MANUFACTURER NAME		D. DATE	
WICV COST Analysis		מאומרטטטרי	Tracked Co	Tracked Combat Vehicles	MBI VEHS/1/	FIELD A	TILLEHY AMMUNITI	FIELD ARTILLERY AMMONTION SUPPORT	HOH	UDLF	UDLP-GSD	Febru	February 1997
WTCV	Ω		FY 96			FY 97			FY 98			FY 99	
Cost Elements	8	TotalCost	ğ	UnitCost	TotalCost	Qt	UnitCost	TotalCost	Οţ	UnitCost	TotalCost	Qty	UnitCost
		000\$	Each	ક	\$000	Each	s	\$000	Each	œ	000\$	Each	s
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4. Track 5. BII		895 305	7872	114 6354	897	7872	114						
Government Furnished Materiel Engineering Change Orders		2955			3702								
Engineering - Government Engineering - Contractor To Project Management Administration		2448 600			6889 12699 1370			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
11. Initial Production Test 12. Fielding		259 825		<u>.</u>	332 1152		· ·						
Total		49988		1041417	64140		1336250						
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BUDGET PR	BUDGET PROCUREMENT HISTORY AN	D PLAND	Y AND PLANNING EXHIBIT (P-5A)					DATE		
ı								Febr	February 1997	1997
B. APPROPHIATION / BUDGET ACTIVITY					C. P-1 ITEM NOMENCLATURE	MENCLATURE	,,,			
PROCUREMENT OF WPNS	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	Sombat Vehi	cles		FIELD A	RTILLEF	FIELD ARTILLERY AMMUNITION SUPPORT	ITION	SUPP	ORT
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT	CONTRACTED BY	AWARD DATE	DATE OF FIRST	1	UNIT COST SF	VAIL	SPEC IF	IF YES W/A
1. Basic Vehicle		AND I YPE			DELIVERY	Each	\$	MOM	REQ'D	
FY 96	United Defense (UDLP-GSD)	SS/FFP	TACOM	96-Inc	May-98	48	804938			
FY 97	Tork, PA United Defense (UDLP-GSD)	OPTION TACOM	TACOM	Feb-97	Nov-98	48	733667			
2. Engine	York, PA									·
FY 96	Detroit Delsel	SS/FFP	TACOM	96-Jnf	Nov-97	48	27479	-	W-1.	
FY 97	Detroit, MI Detroit Deisel	0	TACOM	Jan-97	Aug-98	48	27479			•
3. Roadwheels	Detroit, MI	EPA)					
FY 96	North American Molded Products	C/FFP	TACOM	May-96	Oct-97	1344	107	· · · · · · · · · · · · · · · · · · ·		
FY 97	Hartville, OH North American Molded Products	C/FFP	TACOM	Jan-97	Jan-98	1344	107			
4. Track	Hartville, OH				·					
FY 96	VAREC, Belguim	C/FFP	TACOM	Jul-96	Oct-98	7872	114			
FY 97	TBD	C/FFP	ТАСОМ	Aug-97	May-98	7872	114			
						-				
REMARKS:			₹.					-		





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APPROPRIATION / BUDGET ACTIVITY	TIVITY			P-1 ITEM NOMENCLATURE	-			
PROCUREME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	3T VEHS /Tracked Combat	Vehicles			ARMORED COMBAT E/	ARMORED COMBAT EARTHMOVER (G82303)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	54	0	0	0	0	0	0
COST (in millions)	0.0	51.0	0.0	0.0	0.0	0.0	0.0	0.0

and power train. The M9 provides the unique capability to travel at high speeds while retaining the capability for heavy digging. It has been provided to combat engineers and engineer support units. Its primary use is to support maneuver forces by digging survivable fighting positions for tank, transportable in C130, C141, and C5 aircraft. It provides light armor and chemical protection for the operator and armor protection for the engine DESCRIPTION: The M9 Armored Combat Earthmover (ACE) is a highly mobile, high speed, tracked, armored combat earthmover. It is air infantry, and artillery units and create anti-tank ditches for obstacles.

JUSTIFICATION: Vehicles are required for 4ID units and the mission is to prepare fighting positions for the Army's prime ground combat vehicles, the M1 and M2/M3.

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Exhibit P-5A Procurement History and Planning

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	BUC	BUDGET ITEM JUS	ISTIFICATION SHEET	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	YTIVIT			P-1 ITEM NOMENCLATURE	E			
PROCUREME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	3T VEHS /Tracked Combat	Vehicles			ABRAMS TANK TRAINI	ABHAMS TANK TRAINING DEVICES (GB1300)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	6.1	12.6	13.4	13.9	8.5	11.2	12.6	13.1

M1A2 TRAINING DEVICES

DESCRIPTION: The family of M1A2 Training Aids, Devices, Simulators and Simulations (TADSS) will replicate actual tank performance without incurring the much higher costs of operating the tank itself.

- varying scenarios as well as atmospheric conditions. The System Enhancement Program (SEP) improvements will be cut Into production in FY98. - Advance Gunnery Training System (AGTS) - These are precision gunnery trainers which provide realistic commander and gunner training under
- Maintenance Trainers These systems provide training in essential unit and direct support/general support tasks. There are four different trainers: Electrical System Test Set Line Replaceable Unit (DSESTS LRU) simulators. The students (approx 600/yr) will learn about the sub-systems and M1A2 Hands-on-Trainer (HOT); Hull Electrical Diagnostic/Troubleshooting (D/T) Trainer; Turret/Fire control D/T Trainer; and Direct Support procedures for troubleshooting and fault isolating the tank system. The intended sites are Ft. Knox and Aberdeen Proving Grounds.
- SEP Integration This funding provides for integration of SEP improvements into the various training devices impacted by those changes on the

JUSTIFICATION: Fielding of the M1A2 Main Battle Tank requires concurrent fielding of a training support package. Rising O&S costs will drastically reduce the capability to provide effective, realistic training on the M1A2 tanks through the operational use of the vehicle. Realistic training on a family of training devices simply makes better economic sense.

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TR	T ACTIVITY AT OF WE	A RAPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1	ABT VEHS / 1 /	B. WEAPON ABBAMS 1	S TANK TRAIN	3. WEAPON ABBAMS TANK TBAINING DEVICES (GB1300)	181300)	C. MANUFACTURER NAME		D. DATE	TE Fohnsoy 1007
COSt Alianysis	-		Tracked	Tracked Combat Vehicles				None par	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			-	uary 1997
WTCV	٥	- 1	FY 96		1	FY 97			FY 98			FY 99	
Cost Elements	ខ	TotalCost	Qty	UnitCost	TotalCost	Oty	UnitCost	TotalCost	Qıl	UnitCost	TotalCost	οţλ	UnitCost
		\$000	Each	\$000	\$000	Each	000\$	000\$	Each	000\$	\$000	Each	\$000
Adv Gunnery Training System (AGTS)	⋖											-	
1) Production		1819			0099			7700			8800		
2) Gov't Spt		506			220			220			400		
		2907			2840			1768			300		
SUBTOTAL		2200	7	743	0666	9	1665	10018	9	1670	9500	80	1188
M1A2 Maintenance Trainers 1) Production 2) Gov't Spt 3) First Article Test 4) Non Recurring Cost	⋖	750 183											
SUBTOTAL		933	VAR	VAR									
M1A2 Non System Integration Kits 1) Production 2) Gov't Spt 3) First Article Test 4) Non Recurring Cost	<				550	***************************************							
SUBTOTAL					009	VAR	VAR						
M1A2 Software Upgrades 1) Production 2) Gov't Spt 3) First Article Test 4) Non Recurring Cost	<				100	, ₁₀ , 211		100			100		
SUBTOTAL					1000	VAR	VAR	1200	VAR	VAR	1200	VAR	VAR
SEP Integration 1) Production 2) Gov't Spt 3) First Article Test 4) Non Recurring Cost	∢				1000	·		633 50 1450			3000 50 100		
SUBTOTAL		•			1000	VAR	VAR	2133	VAR	VAR	3150	VAR	VAR
тотаг		6133			12590			13351			13850		

BUDGET PRO	BUDGET PROCUREMENT HISTORY AND	PLANNI	RY AND PLANNING EXHIBIT (P-5A)			i		DATE	February 1997	997
B. APPROPRIATION / BUDGET ACTIVITY					C. P-1 ITEM N	C. P-1 ITEM NOMENCLATURE	3E			
PROCUREMENT OF WPNS	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	at Vehicles				ABRAMS TA	ABRAMS TANK TRAINING DEVICES (GB1300)	/ICES (GB	1300)	
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST	ату	UNIT COST	SPECS AVAIL NOW	SPEC I	IF YES W/A
Adv Gunnery Training System (AGTS)							3		2	
FY 96		C-FP	STRICOM	Feb-96	May-97	VAR	VAR	Yes	ž	
FY 97		다. 단 년	STRICOM	Jan-97	Mar-98	VAR	VAR	Yes	2	
FY 98 FY 99	Lockheed Martin, Orlando, FL Lockheed Martin, Orlando, FL	- <u>-</u>	STRICOM	Mar-98 Jan-99	Mar-00 Mar-01	VAR VAR	VAR			
MAAO Mejatenenene Terlinene										
M IAZ Maintenrance Hantels FY 96	Contraves, Tampa, FL	C-FFP	STRICOM	Mar-96	Mar-98	VAR	VAR	Yes	ş	
M1A2 Non System Integration Kits 1/ FY 97	Various	C-FFP	STRICOM	Mar-97	Jun-98	VAR	VAR	ટ્ટ	g	
									<u> </u>	
										-
M1A2 Software Upgrades 2/				1						
FY 97	Various	O-FF	STRICOM	Dec-96	Dec-97	VAR.	VAR.	2 :	ဍ :	
200 L	varous	- T	SIRICOM	Dec-97	Dec-98	YAH	VAH	2	2	
FY 98	Various	C-FFP	STRICOM	Dec-98		VAR	VAR	ဍ	ž	
SEP Integration										
FY 97	Lockheed Martin, Orlando, FL	C-PIF	STRICOM	Feb-97	¥	VAR	VAR	£	ž	
FY 98	Lockheed Martin, Orlando, FL	C-PIF	STRICOM	Feb-98	Ϋ́	VAR	VAR	g	ž	
FY 99	Lockheed Martin, Orlando, FL	C-PIF	STRICOM	Feb-99	Mar-00	VAR	VAR	ટ	ž	

1/ M1A2 Non-System Integration Kits provide system unique kits allowing the installation of Non-System Training Devices, such as Thru Sight Video (TSV), Tank Weapon Gun Simulation System (TWGSS) and Precision Range Integrated Maneuver Exercise (PRIME), and Multiple Integrated Laser Engagement System (MILES) onto the M1A2 tank. REMARKS:

2/ M1A2 trainer software upgrades update M1A2 training devices to keep pace with changes in the M1A2 tank.





							P-1 ITEM NOMENCLATURE	NOMEN	LATUR	ų.										DATE								Γ
FY 98 / 99 BUDGET PRODUCTION SCHEDULE	랅	CIION	H S				ŀ			ABRAMS TANK TRAINING DEVICES (GB1300)	STAN	TRAI	SNS	EVICI	ES (GE	900	١	١	ł		F		Febru	February 1997	97	١	-	٦
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FY 98 / 99 BUDGET PRODUCTION SCHEDULE	9	CION	国 H S S H E R							٩	BRAN	ABRAMS TANK TRAINING DEVICES (GB1300)	K TR/	INING	DEV	CES (GB130	ô			_			4	February 1997	1997			
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Adv Gunnery Training System (AGTS)	1	95 & Pr	٧	9	9			\vdash	H	 	 -	┝	L						┢	┡	┡	⊢	╄	L	L			T	
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	m	BUDGET ITEM JUS	M JUSTIFICA	TIFICATION SHEET	H			Februa	February 1997		•
APPROPRIATION / BUDGET ACTIVITY	VITY				P-1 ITEM NOMENCLATURE	LATURE					
PROCUREMEN	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Comba	CMBT VEHS /Trac	cked Combat Vehicles				ಕ	DMMAND & CONTR	COMMAND & CONTROL VEHICLE (G84200)	(OC	
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY			2	2	14	22	35	22	35	301	439
COST (in millions)			48.9	30.9	62.7	100.0	122.9	86.8	123.9	1008.0	1584.1
Initial Spares (in millions)				1	-						1.8
Total (in millions)			48.9	31.8	63.6	100.0	122.9	86.8	123.9	1008.0	1585.9
Unit Cost (in millions)			9.8	6.4	4.5	4.5	3.5	3.9	3.5	3.3	3.6

components. It will ensure a mobile, responsive, and survivable command and control capability for the heavy force, and it provides the platform to support command and control on the move. C2V was developed in response to lessons learned during Operation Desert Storm. It supports the Army Digitization Effort, incorporating communications and electronic systems compatible with Army Tactical Command and Control Systems (ATCCS). DESCRIPTION: The Command and Control Vehicle (C2V), XM4 provides a fully tracked, armored vehicle based on Bradley A2 and MLRS designs and

JUSTIFICATION: This program was initiated as a result of deficiencies in existing command and control vehicles identified during Operation Desert Storm.

Exhibit P-40R

Budget Item Justification Sheet

WTCV Coet Analysis	-	A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TR	T ACTIVITY NT OF WE	A. APPN/BUDGET ACTIVITY TITLENO PROCUREMENT OF WPNS & TBKD CMBT VEHS/1/	ABT VEHS / 1 /	B. WEAPON COMMAN	J VD & CONTRO), WEAPON COMMAND & CONTBO! VEHIC! F (384200)		C. MANUFACTURER NAME United Defense Limited	Ę	D. DATE Fehn	TE Fehriary 1997
COSt Alialysis	-+		Tracked C	Tracked Combat Vehicles				יב יבי ייכור (כי	7	Partnership (UDLP)	o (UDLP)	- 200	ialy 1997
	₽		FY 96			FY 97			FY 98			FY 99	
Cost Elements	8	TotalCost	ð	UnitCost	TotalCost	ð	UnitCost	TotalCost	Q _f	UnitCost	TotalCost	Qţ	UnitCost
	\top	\$000	Each	000\$	\$000	Each	\$000	\$000	Each	000\$	000\$	Each	\$000
 Vehicle Engine (included in LOT buy) 					12394	လ	2479	15668	5	3134	35507	4	2536
_					739	2	148	754	S.	151	2155	4	154
	-			•							2656	4 5	190
											1654	4 :	118
7. Spail Liners (Neviar)					141	LC.	80	155	ĸ	5	820	4 4	59
_					1826	22.0	365	1475	2	295	3087	4	22
10. Veh Inter/Intra Communication System (VIICS)		·			396	r.	79	226	က	45	629	4	45
Subtotal Hardware Cost			•		15496			18278	,		47542		
11. Tooling 12. FAT/Qual of Vendors													
Subtotal Non Recurring Production			•										
			,		1185 9296 300 190 522			680 2791 7179 408 389 286 886			964 2845 9761 438 418 292 421		
20. Cummins Engine Life-of-Type (LOT) Buy	_				21950	439	20						
TOTAL					48939			30897			62681		

BUDGET PRO	BUDGET PROCUREMENT HISTORY AND	PLANN	ORY AND PLANNING EXHIBIT (P-5A)				<u> </u>	DATE Fet	February 1997	
B. APPROPRIATION / BUDGET ACTIVITY					2. P-1 ITEM N	C. P-1 ITEM NOMENCLATURE	RE			
PROCUREMENT OF WPNS	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	bat Vehicles				COMMAND	COMMAND & CONTROL VEHICLE (G84200)	OLE (G842	(00	
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	OTY Fach	UNITCOST	SPECS AVAIL NOW	SPEC IF N REV RFO'D	IF YES W/A
1. Vehicle FY 97	UDLP, York, PA	SS/FFP	TACOM	Dec-96	Apr-98	•	2479	+	8	
FY 98 FY 99	UDLP, York, PA UDLP, York, PA	SS/FFP SS/FFP	TACOM	Dec-97	Apr-99 Apr-00	5 41	3134 2536		운 _운	****
3. TransmissionFY 97FY 98FY 99	Lockheed-Martin, Pittsfield, MA Lockheed-Martin, Pittsfield, MA Lockheed-Martin, Pittsfield, MA	SS/FFP SS/FFP SS/FFP	TACOM TACOM TACOM	Mar-97 Mar-98 Mar-99	Apr-98 Apr-99 Apr-00	s 4 <u>†</u>	148 151		222	
4. Primary Power Unit FY 99	TBD	TBD	TACOM	Dec-98	Apr-00	4	190		<u> </u>	
5. Environmental Control Unit FY 99	TBD	TBD	TACOM	Dec-98	Apr-00	44	42		<u> </u>	
6. Bio Chem Unit FY 99	TBD	TBD	TACOM	Dec-98	Apr-00	14	118			
7. Kevlar Armor FY 99	TBD	TBD	ТАСОМ	Dec-98	Apr-00	14	29			
9. Mission Component Integration FY 97 FY 98 FY 99	LM West Dev Lab, San Jose, CA LM West Dev Lab, San Jose, CA LM West Dev Lab, San Jose, CA	РР-ОР ОР-ОР ОР-ОР	CECOM CECOM CECOM	Feb-97 Dec-97 Dec-98	Apr-98 Apr-99 Apr-00	c c 4	365 295 221		8 8 8	
REMARKS: LM West Dev Lab - Lockheed-Martin Western Development Labs	Stem Development Labs								_	

LM West Dev Lab - Lockheed-Martin Western Development Labs

FY 98: High vehicle cost reflects reduced business base

FY 99: Breakout of Primary Power Unit, Environmental Control Unit, Bio Chem Unit, and Kevlar Armor





Exhibit P-5A Procurement	History and Planning
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	BUDGET PROC	BUDGET PROCUREMENT HISTORY AND	PLANNIN	RY AND PLANNING EXHIBIT (P-5A)						February 1997	71
B APPROPRIATIO	B APPROPRIATION / BUDGET ACTIVITY					2. P-1 ITEM N	C. P-1 ITEM NOMENCLATURE	RE			
	PROCUREMENT OF WPNS	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	at Vehicles				COMMAND	COMMAND & CONTROL VEHICLE (G84200)	11CLE (G842	(00)	
	LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT	CONTRACTED BY	AWARD DATE	DATE OF FIRST	Yu	15			F YES W/A
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REMARKS:	LM West Dev Lab - Lockheed-Martin Western Development Labs	stem Development Labs									
	FY 98: High vehicle cost reflects reduced business base	d business base									
	FY 99: Breakout of Primary Power Unit, Environmental Control Unit, Bio Chem Unit, and Spall Liners(Kevlar)	Environmental Control Unit, Bio Chem	Unit, and S	pall Liners(Kevlar)							

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CODE "B" ITEM	CODE "B" ITEM DESCRIPTION	DATE	February 1997	REPORT	REPORT CONTROL SYMBOL DD-COMP(AR)1092	
APPROPRIATION PROCUREMENT OF WPNS & TRKD CMBT VEHS	ACTIVITY Tracked Combat Vehicles	P-1 ITEM NOMENCLATURE COM	CLATURE COMMAND 8	URE COMMAND & CONTROL VEHICLE (G84200)	(G84200)	
1. CURRENT DEVELOPMENT AND TEST STATUS						
				SCHEDIII E DATE		
		CURRENT	LAST RPTD	SCHEDOLE DATE	REASON FOR DELAY.	
		(1)	(2)		(3)	
a. DEV TEST & EVAL (DT&E)	PLAN / ACTUAL	Aug-95	Aug-95			
b. INITIAL OPER TEST & EVAL (IOT&E)	PLAN / ACTUAL	Mar-99	Mar-99			·
c. OPER TEST & EVAL (OT&E)	PLAN / ACTUAL					
d. AVAIL DATE OF TECH DATA PKG (TDP)		,				
OR PERFORMANCE SPECIFICATIONS		Sep-98	Sep-98			
2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE						
3. EQUIPMENT ITEM(S) TO BE REPLACED						
M577						
4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT	TO BE REPLACED					
Increased servivability, mobility, responsiveness, and growth. A Desert Storm Initiative.	d growth. A Desert Storm Initiative.					
5. DEVELOPMENT CONTRACT INFORMATION						
OR NAME PLANT	COMPONENT	THROUGH 1996	1997	1998	1999 BE)	BEYOND BYS
UDLP San Jose CA/York Py	PA (9)	61.1	2.8	1.8		0
San Jose CA		18.0	1.1			
In House/Other		16.2	3.8	7.1		
ONIGHT DETREE		6 30	4.4	00		
IOIAL HDIKE FUNUNG		85.5		80		
o. Remanans TDP development relates to speres only and not to the entire vehicle due to Army templating.	cle due to Army templating.					
* Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date.	quired to adequately explain delay from previous date.					

						DATE			_
	BNB	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	IEET			February 1997		
APPROPRIATION / BUDGET ACTIVITY	TIVITY			P-1 ITEM NOMENCLATURE	Ē				
PROCUREME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	3T VEHS /Tracked Combat	Vehicles			CARRIER, MOD (GB1930)	OD (GB1930)		
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	
QUANTITY	0	0	0	0	0	0	0	0	
COST (in millions)	48.0	43.0	20.2	34.0	41.3	41.2	44.7	45.4	_

to ensure safety, provide operational stability and reduce logistical burden. Operations Just Cause and Desert Storm highlighted the need to upgrade shelters, mortars, command centers, and cargo. The current fleet will be required for at least 20-30 more years and must be continuously modified each mechanized division. These carriers provide essential transport for troops, antitank weapons, air defense systems, electronic warfare (EW) DESCRIPTION: The M113 Family will consist of 21,400 vehicles on the FY96 Table of Authorization and Equipment with almost 700 carriers in he mobility and chemical protection of this fleet, to further enhance performance, reliability, survivability, and supportability.

USTIFICATION

- 1. CREW CHEMICAL PROTECTION: Provides vehicular adaptation, attachments, and connections to permit use of the current Ventilated Face electrical installation hardware for use in conjunction with an individual's personal M14A1 face mask. Permits operational use of the vehicle in a Mask (VFM) subsystems. The VFM system includes the necessary blowers, filters, heaters, hoses and switches, and vehicle and subsystem nuclear, biological, and chemical (NBC) environment.
- 2. DRIVER'S NIGHT VIEWER: The M19 image intensifier currently used on the M113 FOV has limited night vision. The AN/VVS-2(V)1A driver's night viewer has been adapted for use on the M113 FOV. The driver's night viewer enhances operational capability by providing capability for travelling in darkness and low visibility conditions equal to that on the Abrams and Bradley forces.
- diesel engine provides horsepower which increases vehicle survivability/mobility. Coupling the higher output engine with the improved transmission 3. BLOCK 1: Provides improvements to enhance crew survivability and mobility to meet operational requirements. Addition of a turbo charged results in a more reliable power train. The spall liner and external fuel tanks significantly improve crew survivability
- 4. FUEL SYSTEM: The M577A2 currently incorpoates a 4.2KW mogas powered generator. The Army transitioned to all dlesel generators in the mid 1980's and a new diesel generator is scheduled to be available by FY 96. This modification incorporates additional fuel lines to permit the generators to use on board vehicle diesel fuel. This modification will be incorporated at a rate consistent with receipt of new generators.

Item No. 17



APPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF WPINS & TRKD CMBT VEHS // racked Combat Vehicles	BUDGET ITEM JUSTIFICATION SHEET		DATE February 1997
t Vehicles		P-1 ITEM NOMENCLATURE	
	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles		CARRIER, MOD (GB1930)

PROCUREA	PROCUREMENT OF WPNS & TRKD CMBT VEHS /fracked Combat	S /Tracked Combat Vehicles	Se			CARRIER, MOD (GB1930)	381930)	
OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-91-05-4311	Crew Chemical Protection							,
Oper Capability	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
1-94-05-4463	Driver's Night Viewer							
Oper Capability	1.4	1.1	1.6	1.8	1.4	1.4	1.4	1.4
1-84-05-4026	Block I							
Oper Capability	276.9	40.1	16.9	30.6	37.7	37.6	41.1	41.8
1-91-05-4312	Fuel Systems							
Oper Capability	3.4	0.8	0.7	9.0	1.2	1.2	1.2	1.2
Totals	282.7	43.0	20.2	34.0	41.3	41.2	44.7	42.4
								i.
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						

	Ž	ODIFIC/	ATION II	MODIFICATION INSTALLATION SUMMARFDate	ATION S	UMMAF	Date		
							•	February 1997	7.6
Ĺ			(TOA, D	ollars in	(TOA, Dollars in Millions)	•			
	Zi Zi								
System/Modification	FY 1996	FY 199Z	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
CARRIER, MOD								-	
GB1930									
Crew Chemical Protection	0.0	0.5		0.4	0.4	0.4	4.0	0.4	2.9
Driver's Night Viewer	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Block I	7.2	8.1	5.9	4.1	4.9	5.2	5.2	5.8	43.7
Fuel Systems	0.5	9:0		0.2	0.1	0.3	0.5	0.3	2.0
Totals	7.4	9.2	6.4	2.0	5.4	5.9	5. 8.	6.5	48.6

	INDIVIDUAL MODIFICATION		Date February 1997	1997
MODIFICATION TITLE:	Crew Chemical Protection 1-91-05-4311			
MODELS OF SYSTEMS AFFECTED:	M113A2, M113A3, M577A2			
DESCRIPTION / JUSTIFICATION:				
Provides vehicular adaptation, attachments and c system includes the necessary blowers, filters, he conjunction with an individual's personal M14A1 fenvironment.	Provides vehicular adaptation, attachments and connections to permit use of the current Ventilated Face Mask (VFM) subsystem. The VFM system includes the necessary blowers, filters, heaters, hoses and switches, and vehicle and subsystem electrical instaliation hardware for use in conjunction with an individual's personal M14A1 face mask. Permits operational use of the vehicle in a nuclear, biological, and chemical (NBC) environment.	urrent Ventilated Face Mask shicle and subsystem electr se of the vehicle in a nuclea	(VFM) subsystem. The Vical installation hardware foir, biological, and chemical	FM r use in (NBC)
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	VELOPMENT MILESTONES:	OINING	ACCOMPLIGHTS	
Preliminary Design Review:			N/A	
Critical Design Review:			N/A	
Contractor Test and Evaluation:	uation:		N/A	
Development Test and Evaluation:	raluation:		N/A	
inital Operational Test and Evaluation:	d Evaluation:		N/A	
IPR Production Decision			N/A	
TDP Available:			Feb-92	
				•

				:	INDIV	IDUAL	INDIVIDUAL MODIFICATION	SATION							Date	ıte		February 1997	y 1997	
MODIFICATION TITLE (Cont):		S	w Che	mical	Prote	tion 1	Crew Chemical Protection 1-91-05-4311	-4311												
FINANCIAL PLAN: (\$ in Millions)		ſ																		
	FY 1996	 ~ ;	EV 4007		EV 4000	٥	EV 4000	ŀ	2000		77	}	2000	5	2000	5	F		101	
	S A	+	S A	+		†	<u>6</u> 20		1 80	+	20	+	1 20 20	v es	100 €	2 8	2 8	69	1 2 A	8
RDT&E	-	┢	_	╁	-	╁	\vdash	+	-	╁		+	-		-					
PROCUREMENT																				
Kit Quantity																				
Installation Kits	382	0:	188	0.5	221	9.0	216	9.0	211	9.0	202	9.0	202	9.0	198	9.0	3224	10.9	5049	16.0
Installation Kits Nonrecurring															-					
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data							···		-		-				-					
Training Equipment																				
Support Equipment																	<u> </u>			
Other regiment																				
Interim Contractor Support													-							
							-													
Installation of Hardware													<u>-</u>				••			
TO 1006 & Date Cast			700	u	ű										-				ç	1
SIN Idha John Sagara L			707		CS :	7 0			-										382))
FY 1997 Eqpt Kits					141	0.5	47	0.											188	0.3
FY 1998 Eqpt Kits							166	0.3		0.1	-								221	0.4
FY 1999 Eqpt Kits		-		_					162	0.3	54	0.1							216	0.4
FY 2000 Eqpt kits											159	0.3	52	0.1					211	0.4
FY 2001 Eqpt kits													156	0.3	51	0.1			207	0.4
FY 2002 Eqpt kits															152	0.3	20	0.1	202	0.4
FY 2003 Eqpt kits																	198	4.0	198	0.4
(FY(TC) Eqpt (xx kits)																	3224	7.3	3224	7.3
Total Installation Cost			287	0.5	236	0.4	213	0.4	217	0.4	213	0.4	208	0.4	203	0.4	3472	7.8	5049	10.7
Total Procurement Cost		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		18.7		26.7
METHOD OF IMPLEMENTATION: Depot			3	Y Y	MINIS	PATIV	ADMINISTRATIVE LEADTIME:	IME			Months	<u>L</u>	SODOC	TION	PRODUCTION LEADTIME:	<u>ii</u> 8	5	Months		
Contract Dates: Delivery Date:	<u>.</u>	FY 1997: FY 1997:	ŠÕ	Oct 97		ב ב	FY 1998:		Oct 98	Oct 98		ב ב	FY 1999: FY 1999:		Oct 99	0 6				
				l	١													ĺ		

Installation Schedule:	, ÷	Crew Chemical Protection 1-91-05-4311 Protection 1-91-05-4311	mical F FY 1997	Prote 7	ction	1-9-1	-05-431 FY 1998	311			FY 1999	66			FY 2000		Date		February FY 2001	February 1997 Y 2001				
		H	CI	(C)	41	-	OI.	_ල	41		⊘ I	ଜା	41		CNI	ଚା	41	-	01	mi	41			Total
Inputs FY 1996 & Prior		ž	128	127	127	!	!	!	į															38
FY 1997 FY 1998						47	74	47	4/	26	55	55	55											221
FY 1999														54	54	24	54		-					23
Outputs																								Š
FY 1996 & Prior			96	96	92	92	ţ	1	1	ţ														382
FY 1997							4	4	}	,	5	r.	55	55										22 5
FY 1998 FY 1999											3	3	}	}	54	54	54	54						21
		í	9			Ĺ	× × ×			Ц	EV 2002			ц	EV 2003			_	FY 2004			FY 2005	ıo	
		-	2 2	က	4	-	2	က	4	-	2	ო	4	· -	N	က	4	-	8	က	4	1 2	က	4 Total
Inputs																								3
FY 2000						23	23	23	25															Z 8
FY 2001										25	25	25	21			!	1							S 8
FY 2002														5	51	20	20	1	i	!				202
FY 2003																		20	20	94	94			22
Outputs																								3
FY 2000							23	23	23	25														2 2
FY 2001											25	25	25	2			,							207
FY 2002															5	2	20	20			1	:		ત્ર :
FY 2003																			22	22	6	49		۲
Remarks:																								
																						;		

	INDIVIDUAL MODIFICATION	Date February 1997
MODIFICATION TITLE:	Driver's Night Viewer 1-94-05-4463	
MODELS OF SYSTEMS AFFECTED:	M113 Family of Vehicles	
DESCRIPTION / JUSTIFICATION:		
The M19 image intensifier cur for use on the M113 FOV. Th visibility conditions equal to the	The M19 image intensifier currently used on the M113 FOV has limited night vision. The AN/VVS-2(V)1a driver's night viewer has been adapted for use on the M113 FOV. The driver's night viewer enhances operational capability by providing capability for travelling in darkness and low visibility conditions equal to that on the Abrams and Bradley forces.	river's night viewer has been adapted for travelling in darkness and low
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		
Preliminary Design Review:	PLANNED W:	ACCOMPLISHED N/A
Critical Design Review:		N/A
Contractor Test and Evaluation:	Jation:	N/A
Development Test and Evaluation:	raluation:	N/A
Inital Operational Test and Evaluation:	d Evaluation:	N/A
IPR Production Decision		N/A
TDP Avallable:		Sep 94

					NDNI	INDIVIDUAL MODIFICATION	MODIF	CATIO								Date		February 1997	y 1997	
MODIFICATION TITLE (Cont):		۵	Driver's Night	- 1	'iewer	Viewer 1-94-05-4463)5-446	ည္မ											:	
FINANCIAL PLAN: (\$ in Millions)	77	١																-		
	and Prior	offic Tolic	FY 1997	1 26	FY 1998	86	FY 1999	66	FY 2000	8	FY 2001	9	FY 2002	020	FY 2003	903	12		TOTAL	ĄĽ
1	₹	\$	₹		è		ξ	<u> </u>	ਣੇ	69	ğ	69	δ	69	λ	ક્ક	ð	8	Q A	\$
RDT&E PROCUREMENT Kit Quantity Installation Kits	223	4.1	168	÷	539	9.	263	1 .8	200	4:	196	4.	192	4:	188	4.	1931	15.9	3600	27.4
Equipment Equipment Nonrecurring Engineering Change Orders													.							
Data Training Equipment Support Equipment																				
Other Interim Contractor Support			_			*										·				
Installation of Hardware FY 1996 & Prior Eqpt Kits FY 1997 Eqpt Kits	29		156		168														223	
FY 1998 Eqpt Kits FY 1999 Eqpt Kits							539		263		000								239	
FY 2001 Eqpt kits											9		196		9				196	
FY 2002 Eqpt kits FY 2003 Eqpt kits															192	-, , .	188		192	
(FY(TC) Eqpt (xx kits)	79		156		168		239	+	263		200	\top	196	\parallel	192	1	1931	- 0	1931	0.1
Total Procurement Cost		4.1		뒤		1.6		1.8		4-		4.		4.		4:		16.0		27.5
METHOD OF IMPLEMENTATION: Debot Contract Dates: Delivery Date:		FY 1997: FY 1997:	ŀ	A Jan 97 Aug 97	DMINIS	ADMINISTRATIVE LEADTIME: FY 1998: FY 1998:	IVE LEAD FY 1998: FY 1998:	OTIME:	□ ∢	3 N Dec 97 Aug 98	Months		PRODUCTION LEADTIME: FY 1999: Aug 96 FY 1999: Aug 96	NOILO	LEADTI De Au	OTIME: Dec 98 Aug 99	80	Months		

Installation Schedule:		Driver's Night Viewer 1-94-05-4463	זt Viev	ver 1-(94-05	-4463									۵	Date		Februs	February 1997					
	FY 1996	FY	FY 1997			FY 1998	866			FY 1999	66			FY 2000	2			FY 2001	_					
	& Prior 1	7	ପା	41	-	0 1	m	41	-	O.I	(N)	41	-	21	mi	41	-	OJ.		41				Total
Inputs																								
FY 1996 & Prior																								
FY 1997				42	42	42	42																	168
FY 1998								90	9	9	29													239
FY 1999												99	99	99	65									263
<u>.</u>																								
Carpara																								
FY 1996 & Prior																								
FY 1997					42	45	42	42																168
FY 1998									90	9	09	29												239
FY 1999													99	99	99	65								263
		FY 2000	00			FY 2001	_		щ	FY 2002			Ŧ	FY 2003			Œ	FY 2004			FY 2005	305		
		1 2	8	4	_	8	က	4	-	8	က	4	-	8	က	4	-	8	က	4	-	2 3	4	Total
Inputs																								
FY 2000				20	20	20	20																	200
FY 2001								49	49	49	49													196
FY 2002												48	48	48	48									192
FY 2003																47	47	47	47					188
Outputs																								
FY 2000					20	20	20	20																200
FY 2001									49	49	49	49												196
FY 2002													48	48	48	48								192
FY 2003																	47	47	47	47				188
Remarks:																								
																								•
																			ł					



	INDIVIDUAL MODIFICATION	Date February 1997	
MODIFICATION TITLE:	Block I 1-84-05-4026		
MODELS OF SYSTEMS AFFECTED:	M113A2, M548, M577A2, M981, M1059, M1064, M1068		
DESCRIPTION / JUSTIFICATION:			
Provides improvements to enhance crew survival provides horsepower which increases vehicle sur more reliable power train. The spall liner and ext	Provides improvements to enhance crew survivability and mobility to meet operational requirements. Addition of a turbo charged diesel engine provides horsepower which increases vehicle survivability/mobility. Coupling the higher output engine with the improved tranmission results in a more reliable power train. The spall liner and external fuel tanks significantly improve crew survivability.	nents. Addition of a turbo charged diesel en t engine with the improved tranmission resulta rvivability.	ine in a
			-
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	/ELOPMENT MILESTONES:	ACCOMPLISHED	
Preliminary Design Review:	•	N/A	
Critical Design Review:		N/A	
Contractor Test and Evaluation:	uation:	N/A	
Development Test and Evaluation:	aluation:	N/A	
Inital Operational Test and Evaluation:	d Evaluation:	N/A	
IPR Production Decision		May-86	
TDP Available:		98-unr	

					N N	VIDUAL	INDIVIDUAL MODIFICATION	ICATIO	Z							oteo		Cohen	Coheman 1007	
MODIFICATION TITLE (Cont):		<u></u>	Block I 1-84-05	1-84-0	4															
FINANCIAL PLAN: (\$ in Millions)	7	FV 1996																		
	and	and Prior	FY 1997	266	FY 1998	98	FY 1999	66	FY 2000	8	FY 2001	100	FY 2002	9	FY 2003	203	F		IATOT	Į
	ð	69	ਰੈ	s	₹	8	₹	+	ĕ	69	ĕ	65	È	4	ě	9	Ž	,	2	٩
RDT&E		1.0						H	+	+	+			,		,	9	•	3	7
PROCUREMENT						-														-
Kit Quantity								-												
Installation Kits	2334	223.4	258	27.7	99	7.1	226	25.8	230	26.8	222	26.3	245	29.7	238	29.7	2003	271.3	5822	667 B
Installation Kits Nonrecurring					-				<u>.</u>				!	:					1	5
Equipment		3.4																		~
Equipment Nonrecurring																				j
Engineering Change Orders				-			-4.													
Data		40.2		2.9		2.9		0		r.		r C		ų		· ·		7 00		000
Training Equipment								2	•	-						4.		4.66		103.4
Support Equipment																				
Other																				
Interim Contractor Support									•								-			
FDT		-		Č						-		,	-	7		,		1		
: <u>1</u> d. l.				- 6		- 6		-		- o		5 6		r.0		0.1		9.0		.
Installation of Hardware		i		2		9		†		0.5		9.		9.0		8.0		7:7		16.1
FY 1996 & Prior Eapt Kits	379	7.2	363	~						_									,	t i
FY 1997 Eapt Kits			}	;	258	ŭ													742	15.3
FY 1998 Foot Kits					2	;	9	•											258	5.9
FY 1999 Ent Kits							3	<u>†</u>	Ċ										99	4.
FY 2000 Fant kits			-	-					200	ţ.	000					_			526	4.9
TV 0004 Frant 1:11											052	2.0							230	5.2
rt zool Eqpt Kits													222	5.2			•••••		222	5.2
FY 2002 Eqpt kits															245	5.8	•		245	5.8
FY 2003 Eqpt kits																	238	5.7	238	5.7
(FY(TC) Eqpt (xx kits)																	2003	54.1	2003	54.1
Total Installation Cost	379	7.2	363	8.1	258	5.9	99	1.4	226	4.9	230	5.2	222	5.2	245	5.8	2241	59.8	4230	103.5
Total Procurement Cost		276.9		40.1		16.9		30.6		37.7		37.6		41.1		41.8		372.8		895.5
METHOD OF IMPLEMENTATION: Demot/Contractor	: Denot/C	Contract	ċ	٩	O INIMO	TRATIV	ADMINISTRATIVE I EADTIME:	TIME		ž	Months	Õ	THE TANK THE PROPERTY OF THE P	1401	1	į	1			
Contract Dates:		FY 1997		, lan 97		<u> </u>	/ 100p.	j	č	7	2	. (ב ב	בו לא ה	ы S	2	Months		
Delivery Date:	. ш	FY 1997:		Jul 97		LÍL	FY 1998:		3 3	Jul 98		LÚ	FY 1999: FV 1000:		ĕ :	Dec 98				
			l									-	.000		ממ	60				

Installation Schedule: Block I 1-84-05-4026	ă	ž 1	-84-0	5-40	့ ၁											۵	Date		Febru	February 1997						Г
ĬL	FY 1996		FY 1997	266			FY 1998	86			FY 1999	66t			FY 2000	8			FY 2001	Ξ						
-	& Prior	1	αı	ଠା	41	-	αı	m	41	-	αŧ	ro)	41	-	OI	(C)	41	=	OI.	ଚା	41				Total	tal
Inputs																										
FY 1996 & Prior	379	91	9	91	90																				7	742
FY 1997						65	92	64	64																W	258
FY 1998										17	17	16	16													99
FY 1999														22	22	26	26								W	226
Ç																										
Outputs	040	č	č	č	8																				,	740
FY 1990 & PROF	n 0	<u>_</u>	5	5	8	į	į	3	3																` '	7 4 7
FY 1997						ç	ŝ	4	94																N	22
FY 1998										17	11	16	16													99
FY 1999														22	22	26	26								N	226
			FY 2000	0		_	FY 2001	_			FY 2002			iT.	FY 2003			ш.	FY 2004			7	FY 2005			
		-	7	က	4	-	0	က	4	-	Ø	က	4	-	8	က	4	-	7	က	4	-	α	ဗ	4 Iotal	tal
Inputs																										
FY 2000						28	28	22	22																CV	230
FY 2001										26	29	22	22												N	222
FY 2002														62	61	6	61								· ·	245
FY 2003																		09	09	29	23				W	238
Outputs																										
FY 2000						28	28	22	22																· ·	230
FY 2001										26	26	22	22													222
FY 2002														62	19	61	61								CA	245
FY 2003																		90	99	59	29					238
Remarks:										•																

	INDIVIDUAL MODIFICATION		2100	
MODIFICATION TITLE:	Fuel Systems 1-91-05-4312		Cate	
MODELS OF SYSTEMS AFFECTED:	M577A2 Command Post Carrier			
Precedential Institution				-
The M577A2 currently incorporates a 4.2 kW moo	rates a 4.2 KW moras nowared generator. The Army	To the production of		
new diesel generator became available in FY 96. vehicle diesel fuel. This modification will be incorp	new diesel generator became available in FY 96. This modification incorporates additional fuel lines to permit the generators to use on board vehicle diesel fuel. This modification at a rate consistent with receipt of new generators.	transitioned to all dieselige litional fuel lines to permit ti ceipt of new generators.	inerators in the mid 1980's and he generators to use on board	æ
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTON	ES:			
Preliminary Design Review:		PLANNED	ACCOMPLISHED N/A	
Critical Design Review:			N/A	
Contractor Test and Evaluation:	uation:		N/A	
Development Test and Evaluation:	aluation:		N/A	
Inital Operational Test and Evaluation:	d Evaluation:		N/A	<u>.</u>
IPR Production Decision			N/A	
TDP Available:			Sep-92	

					INDI	/IDUAL	INDIVIDUAL MODIFICATION	ICATIO	Z						Ď	Date		February 1997	ry 1997	
MODIFICATION TITLE (Cont):		ᄑ	Fuel Systems		1-91-05-4312	5-4312														
FINANCIAL PLAN: (\$ in Millions)		1006																		
	and	and Prior	FY 1997	797	FY 1998	86	FY 1999	66	FY 2000	8	FY 2001	16	FY 2002	25	FY 2003	03	15		TOTAL	AL
•	Qfy	S	Qţ	\$	g Ş	€9	Q A	÷	Q _t	\$	Q.	s	Qily	\$	Oty Oty	\$	ģ	€9	Q.	s)
RDT&E PROCUREMENT Kit Quantity																				
Installation Kits	364	3.2	22	0.2	65	9.0	43	0.4	114	- :	85	6.0	9	1.0	88	6.0	612	6.9	1500	15.2
Installation Kits Nonrecurring																				
Equipment Nonrecurring																		-		
Engineering Change Orders						-														
Data						-														
Training Equipment																-				
Support Equipment																				
Other			•																	
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt Kits	91	0.2	273	9.0															364	0.8
FY 1997 Eqpt Kits			·		22	0.1						•							22	0.1
FY 1998 Eqpt Kits							65	0.2										,	65	0.2
FY 1999 Eqpt Kits									43	0.1									43	0.1
FY 2000 Eqpt kits											114	0.3					***************************************		41	0.3
FY 2001 Eqpt kits													92	0.5					92	0.2
FY 2002 Eqpt kits			•								*				100	0.3			100	0.3
FY 2003 Eqpt kits																	88	0.2	88	0.2
(FY(TC) Eqpt (xx kits)																	612	1.8	612	1.8
Total Installation Cost	91	0.2	273	9.0	22	0.1	65	0.2	43	0.1	114	0.3	35	0.2	100	0.3	200	2.0	1500	4.0
Total Procurement Cost		3.4		0.8		0.7		9.0		1.2		1.2		1.2		1.2		8.9		19.2
METHOD OF IMPLEMENTATION: Depot		7		4 to 40	ADMINISTRATIVE LEADTIME:	TRATI	IVE LEAD	DTIME	2	4 € 5 0 0 €	Months	Q Ú	PRODUCTION LEADTIME:	TION	EADTI	OTIME:	ນ ≥	Months		
Contract Dates: Delivery Date:		FY 1997:		Apr 97		L 11L	FY 1998:		J ≪	Apr 98		LĹL	FY 1999:		Š	Apr 99				

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	BUD	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	WITY			P-1 ITEM NOMENCLATURE	ш		•	
PROCUREME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat	IT VEHS /Tracked Combat	t Vehicles			FIST VEHICLE (FIST VEHICLE (MOD) (GZ2300)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	6	15	32	46	68	85
COST (in millions)	0.0	0.0	14.7	16.2	29.3	36.6	51.7	64.1

DESCRIPTION: The Bradley Support Vehicle (BFIST) conducts two primary missions on the heavy force battlefield. The first mission is fire mission enemy targets for delivery of various forms of laser guided munitions. The Fire Support Team (FIST) is attached to a mechanized infantry or armor assigned to division cavalry troops where they perform a similar mission for the Division Commander. There is no technical difference between the planning and execution for maneuver company commanders. The second is targeting enemy positions with conventional munitions or designating execution. Designating targets for special munitions is a secondary mission. The COLT is primarily focused on preparing key and decisive terrain company and is primarily responsible for developing and executing fire support plans that enable success on the battlefield. The Bradley based Combat Observation Lasing Team (COLT) is typically placed in direct support of the maneuver brigade commander. As a brigade commander COLT and FIST Bradley vehicles. The BFIST will accomplish both missions. The FIST team is typically engaged in fire mission planning and asset, the COLT will observe key and decisive terrain of brigade interest and direct artillery assets as planned on this terrain. COLTs are also for targeting conventional munitions or designating special artillery or Air Force delivered munitions.

forces during Operation Desert Storm (ODS). Additionally, the M981 displayed a number of operational deficiencies and shortcomings remedied by JUSTIFICATION: The current Fire Support Vehicle M981 was unable to maintain the operational tempo of Bradley/Abrams equipped maneuver the BFIST design. Exhibit P-40

WTW Cool Account		A. APPN / BUDGET ACTIVITY TITLE/NO	ET ACTIVIT	A. APPN / BUDGET ACTIVITY TITLE/NO		B. WEAPON	NC			C. MANUFACTURER NAME		D. DATE	
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B. APPROPRIATION / BUDGET ACTIVITY				<u> </u>	C. P-1 ITEM NOMENCLATURE	OMENCLATU	RE			
PROCUREMENT OF WPNS	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	at Vehicles		_		FIST	FIST VEHICLE (MOD) (GZ2300)			
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	CODE "B" ITEM DESCRIPTION	SCRIPTION		February 1997	REPOR	REPORT CONTROL SYMBOL DD-COMP(AR)1092	BOL
APPROPRIATION		ACTIVITY	P-1 ITEM NOMENCLATURE	VCLATURE			
PROCUREMENT OF	PROCUREMENT OF WPNS & TRKD CMBT VEHS	Tracked Combat Vehicles			FIST VEHICLE (MOD) (GZ2300)	2300)	
1. CURRENT DEVELOPMENT AND TEST STATUS	ID TEST STATUS						
					SCUEDIUE DATE		
			FINEDGILO	OTGG TOV	CONTROLL DATE		
			(5)	CASI HPID		HEASON FOR DELAY:	
a. DEV TEST & EVAL (DT&E)		PLAN / ACTUAL	Jan-97				
b. INITIAL OPER TEST & EVAL (IOT&E)	JT&E)	PLAN / ACTUAL	96-unf		-		
c. OPER TEST & EVAL (OT&E)		PLAN / ACTUAL	Mar-98	****			
d. AVAIL DATE OF TECH DATA PKG (TDP)	(G (TDP)						
OR PERFORMANCE SPECIFICATIONS	ATIONS		Sep-97				
2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE	VAL FOR SERVICE USE						
3. EQUIPMENT ITEM(S) TO BE REPLACED	EPLACED						
Enables FIST support to maintain Operation Desert Storm initiative.	naintain the operational tempo of tative.	Enables FIST support to maintain the operational tempo of Bradley/Abrams equipped maneuver forces. Operation Desert Storm initiative.					
4. EXTENT OF IMPROVEMENT O	4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT TO BE REPLACED	EPLACED					
5. DEVELOPMENT CONTRACT INFORMATION	FORMATION						
CONTRACTOR NAME	PLANT LOCATION	COMPONENT	THROUGH 1996	1997	1998		BEYOND BYS
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fn-House Tasks	CO (0000)		30.4	15.5	3.0	6.5	2.0
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* Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date.

35.9

TOTAL RDT&E FUNDING 6. REMARKS

						DATE		
	BOD	BUDGET ITEM JUST	TIFICATION SHEET	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	IVITY			P-1 ITEM NOMENCLATURE	Ш			
PROCUREME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat \	T VEHS /Tracked Combat \	Vehicles			BFVS SERIES (MOD) (GZ2400)	MOD) (GZ2400)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	93.1	119.0	61.2	46.6	9.09	57.5	65.2	65.7

improvements are 6 ECPs which will correct deficiencies identified in Operation Desert Storm and include: Laser Range Finder, Position Navigation safety mod, the A2 Card Retrofit, will prevent inadvertent TOW missile launch. Additionally, there is the Presidentially directed HALON Replacement Program. Most of these modifications will be applied concurrently in "blocks" to reduce application cost and inconvenience to the unit. The programs Survivability Kit and the 600HP power pack. The Optically Improved Backup Sights and Periscopes provide eye protection for the crew against near modification kits for the Bradley Fighting Vehicle to improve lethality, survivability, mobility and situational awareness. The Operation Desert Storm System, Equipment Restow Improvement, Combat Identification System, Drivers Vision Enhancer and Missile Countermeasure Device. The A1 to Intercommunications System, TOW mod for AO, Armor Tiles, Engine Access Door Lift Pump and TOW Subsystem Support Equipment Mod. One in these P-Forms were initiated to meet requirements identified to improve the Bradley performance and correct deficiencies. Reduced Bradley A2 conversion effort increases the vehicle survivability and brings the vehicle up to the current A2 configuration, with the addition of the High DESCRIPTION: The funds appropriated, budgeted, and programmed in this budget line will provide for the procurement and application of term lasers. Operational improvements are the Transmission Electronic Controller, the Armament Control Unit Pillow Block, the Vehicle Fighting Vehicle capability, survivability, and mobility will occur if these modifications are delayed or reduced.

DATE	Т	-1 ITEM NOMENCLATURE	BFVS SERIES (MOD) (GZ2400)
	BUDGET ITEM JUSTIFICATION SHEET	APPROPRIATION / BUDGET ACTIVITY	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles

OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	EV 2002	EV 2003
1-84-05-4038	A1-A2 Conversion					1002	1 1 2002	2002
Oper, capability	345.7	11.5	13.5	11.0	0.0	0.0	c	C
1-92-05-4404	A2 ODS Mods						200	2
Oper. capability	69.3	48.9	34.6	29.5	1.8	0.0	0.0	C
1-90-05-4282	Transmission Electronic Controller (TEC)	nic Controller (T						200
Oper. capability	5.8	4.1	3.8	3.4	0.0	0	0	Ċ
1-86-05-4115	Ol Backup Sights/Periscopes	iscopes				2	2	0.0
Oper. capability	19.5	0.7	0.0	0:0	0.0	0.0	C	c
1-91-05-4314	ACU Pillow Block Mod	Q				20	2	2
Oper. capability	5.7	6.0	0.7	0.0	0.0	0		c
1-90-05-4284	Vehicle Intercom System	tem				25	2	9
Oper. capability	8.5	3.4	2:2	0.0	0.0	0	c	c
1-93-05-4441	DECA					2	2	2
Oper. capability	11.5	5.7	1.4	2.7	0.0	00		C
1-92-05-4422	HALON Replacement						2	2.0
Legislative Compl.	4.3	1.0	4.9	0.0	0.0	00	0	c
1-84-05-4038	Armor Tiles						2	2
Oper. capability	41.0	35.5	0.0	0.0	0.0	0.0	00	C
1-92-05-4421	Engine Access Door Lift	Ħ						9
Oper. capability	2.6	0.0	0.0	0.0	0.0	00	0	C
1-90-05-4300	TOW Subsystem Support Equipm	port Equipment						5
Oper. capability	0.0	6.7	0.0	0.0	0.0	0.0	0	C
1-96-05-4510	TOW Mod for AO BFVS							
Oper. capability	13.1	0.0	0.0	0.0	0.0	0.0	0	c
1-96-05-4514	Suite of Survivability Enhancemen	Enhancement Sy	nt Systems (No P3a Set)					
Oper. capability	0.0	0.0	0.0	0.0	13.0	13.0	11.4	10.8
Not Applicable	A3 Improvements (No P3a Set)	P3a Set)						
Oper. capability	0.0	0.0	0.0	0.0	45.8	44.5	53.7	55.4
1-96-05-4517	A2 Card Retrofit							
safety	0.0	0.8	0.2	0.0	0.0	0.0	0.0	0.0





BUDGET ITEM JUSTIFICATION SHEET February 1997	P-1 ITEM NOMENCLATURE ombat Vehicles	9.0 61.2 46.6 60.6 57.5 65.2 65.7							
	8F	9.09							
12:	-1 ITEM NOMENCLATURE	46.6							
ATION SHE		61.2							
T ITEM JUSTIFIC	IS /Tracked Combat Vehicles	119.0							
	/ BUDGET ACTIVITY PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	526.9							
	APPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF	Totals							

	MODIFICATION INSTALLATION SUMMARY	ATION IN	STALL/	ATION S	UMMAF	≥	Date		
			ر د د	: :	Adillion			February 1997	26
	Ã		ב ב ב	Silars El	(10A, Dollars III Millions)				
System/Modification	FY 1996	FY 1997	FY 1998	FY 1999	EV 2000	EV 2001	EV 2002	EV 2002	TOTAL
No P3a Set for modification		╁					7000	200	וסוקר
BFVS SERIES (MOD)									
GZ2400									
A1-A2 Conversion	72.1	8.4	13.5	11.0	0	C	-		1080
A2 ODS Mods	1.8	2.3	1.3	1.0	8.	0.0	0.0	0.0	0.00
Transmission Electronic Controller (TEC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ol Backup Sights/Periscopes	1.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	2.4
ACU Pillow Block Mod	1.3	0.9	0.7	0.0	0.0	0.0	0.0	0.0	2.8
Vehicle Intercom System	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DECA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALON Replacement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Armor Tiles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Engine Access Door Lift	0:0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOW Subsystem Support Equipment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOW Mod for AO BFVS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ity Enhancement Systems		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A3 Improvements		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AZ Card Hetrofit	0:0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	76.9	12.2	15.5	12.1	1.8	0.0	0.0	0.0	118.4
		* -							
									

Modification	
Individual	
Exhibit P-3a	

	INDIVIDUAL MODIFICATION Date	February 1997
MODIFICATION TITLE:	A1-A2 Conversion 1-84-05-4038	
MODELS OF SYSTEMS AFFECTED:	M2A1 (IFV) / M3A1 (CFV)	
DESCRIPTION / JUSTIFICATION:		

The BFVS conversion effort converts the A1 configuration to an A2 configuration.

The conversion effort includes:

1. High Survivability (HS) Kit which will enhance vehicle survivability through the application of alternate armor and selective use of crew compartment spall liners for increased protection against threat from frontal attack. The HS kit also contains other associated changes such as restowage, swim curtain, IFV firing ports, and M240 gun upright.

2. The 600HP power pack, which includes the 600 HP engine and the reliability improved 500-3 Transmission which eliminates the adverse impact of increased vehicle weight on vehicle performance and reliability, resulting from High Survivability changes.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	ACC	ACCOMPLISHED	
	HS KITS	600HP ENGINE	500-3 TRANSMISSION
Preliminary Design Review:	1086	4Q87	1087
Critical Design Review:	1086	1089	2088
Contractor Test and Evaluation:	3Q87	3Q88	2088
Development Test and Evaluation:	4Q87	4088	2088
Inital Operational Test and Evaluation:	3Q87	٧Z	4089
IPR Production Decision	4Q87	1089	ΑΝ
TDP Available:	1089	1089	2088

					Z	INDIVIDUAL MODIFICATION	MODI.	FICATI	No						Date	g g		February 1997	26	
MODIFICATION TITLE (Cont):		A1	-A2 C	onve	rsion 1	A1-A2 Conversion 1-84-05-4038	-4038													
FINANCIAL PLAN: (\$ in Millions)	FY 1996	92																		
	and Prior	jo.	FY 1997	266	FY 1998	966	FY 1999	666	FY 2000	000	FY 2001	1001	FY 2002	02	FY 2003	83	TC	-	TOTAL	
	ਣੇ	\$	ð	မှာ	δ	\$	δ	€\$	ਣੇ	49	άþ	€	δ	€9	ξ	H	άş	\$	<u></u>	es l
PROCIBEMENT																				
Kit Quantity																				
Installation Kits								•	•									·		
High Survivability kits	1358 1	187.9		1.2															1358	189.1
600 HP Engine	1317	45.6	4	1.9												-			1358	47.5
500-3 Transmission	1358	39.2																	1358	39.2
Engineering Change Orders		6.0																		0.0
Data					****		-		- 10					***		-		-		
Training Equipment			•																-	
Support Equipment								•				-								
Other															· · · · · ·					
Interim Contractor Support		······································	•			_														
												,								
Installation of Hardware								_									2 .			•
FY 1996 & Prior Eqpt Kits	957	72.1	86	8.4	168	13.5	94 7.7	7.											1317	1017
FY 1997 Eqpt Kits	***						4												4	
FY 1998 Eqpt Kits			•														•		:	
FY 1999 Eqpt Kits																				
FY 2000 Eqpt kits																				
FY 2001 Eqpt kits																				
FY 2002 Eqpt kits																<u></u>				
FY 2003 Eqpt kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	957	72.1	86	8.4	168	13.5	135	11.0										-	1358	105.0
Total Procurement Cost	3	345.7		11.5		13.5		11.0				П		Н						381.7
METHOD OF IMPLEMENTATION: Depot Conversion	N: Depot C	onversi		, to act	ADMIN	ADMINISTRATIVE LEADTIME:	VE LEA	DTIME		9	Months	•	PRODUCTION LEADTIME:	TION	EADTIM	ш́	12 Months	ıths		
Delivery Date:	Ī	FY 1997: FY 1997:)dii 97		L U	FY 1998: FY 1998:						FY 1999: FY 1999:							
																ŀ				



Idual Modification	
P-3a Indivi	
Exhibit	

Installation Schedule:		-A2 C	A1-A2 Conversion 1-84-05-4038	. uois	1-84-0	15-403	88									Date		#	February 1997	197				
	FY 1996		FY 1997	397			FY 1998	86			FY 1999	_		Ē	FY 2000			FΥ	FY 2001					
	& Prior		0 1	ෆ _්	41		01	ෆ	41		21	41	-	ΟI	m	41	-	Ν	က	4				Total
Inputs																	!	!	l	l				
FY 1996 & Prior	887	42	42	42	42	42	42	42	42	42	42	9												1317
FY 1997												32	6											41
FY 1998																								
FY 1999																			-					
Outputs																								
FY 1996 & Prior	887	42	42	42	42	42	42	42	42	42	42	9												1317
FY 1997											•		o											
FV 1998													Ď.											4
FY 1999																								
		-	FY 2000	_		ш.	FY 2001			F	FY 2002			FY 2003	203			FY 2004	4		ш	FY 2005		
		-	8	က	4	-	7	ო	4	_	Ø	က	4	-	2 3	4	-	2	က	4	-	7	က	4 Total
Inputs																								
FY 2000																								
FY 2001																								
FY 2002																								
FY 2003																								
																	,							
Outputs																								
FY 2000																								
FY 2001																								
FY 2002																								
FY 2003													:											
Remarks:																								
	Bankruc	itcy of p	irime Hi	ah Sun	vivability	v kit pro	ducer c	ontracto	r forced	reprocu	irement	of kits r	procured	d with p	Bankruptcy of prime High Survivability kit producer contractor forced reprocurement of kits procured with prior year funds and associated delay in annihation	spury.	and ass	oclated	delay i	n applic	ation			
	-			D						L		-	3			2	5	3333	2	7	aucı.			

	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	A2 ODS Mods 1-92-05-4404		
MODELS OF SYSTEMS AFFECTED:	M2A2/M3A2		
DESCRIPTION / III STIFF WITH			

DESCRIPTION / JUSTIFICATION:

Six vehicle improvements (ECP's) which will correct deficiencies identified in Operation Desert Storm. These increase vehicle lethality and survivability and situational awareness.

- a. Laser Range Finder: will give the BFVS a first burst on target capability and reduce the time required to acquire and kill a target.
- b. Position Navigation System: Global Positioning System (GPS) integrating hardware and a self calibrating digital compass. This will enable the Bradley commander to determine his exact location at all times and determine the heading and distance to any location.
 - c. Equipment Restow Improvement: Improves the method of stowing internal and external equipment.
- d. Combat Identification System (CID): Provides integration hardware for the passive CID system that will provide visual and thermal signatures detectable between ground to ground vehicles and from air to ground.
 - e. Driver's Thermal Viewer: Increases the driver's ability to see through battlefield obscurants such as dust, fog and smoke during night and day. f. Missile Countermeasure Device: Provides additional protection against a variety of anti tank missiles.
 - Additionally, included in this effort are Armored Hatches to further improve vehicle survivability.

	ACCOMPLISHED	4093	2094	3Q94	1095	1095	2095
	PLANNED	4093	2094	3Q94	4094	1095	2095
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		Preliminary Design Review:	Critical Design Review:	Contractor Test and Evaluation:	Development Test and Evaluation:	Inital Operational Test and Evaluation:	IPR Production Decision

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MODIFICATION TITLE (Cont):			2 OD(3 Mod	A2 ODS Mods 1-92-05-4404	05-44(4													
FINANCIAL PLAN: (\$ in Millions)	FY 1996	966														u				
	and Prior	Prior	FY	FY 1997	FY 1998	866	FY 1999	666	FY 2000	00	FY 2001	10	FY 2002	302	FY 2003	003	TC	0	TOTAL	IAL
	ð	S	ਣੇ	\$	ģ	æ	ð	€	₹	\$	₹ Ö	\$	ğ	\$	ਣੇ	49	Öţ	છ	Qţ	€
RDT&E PROCUREMENT						-		<u> </u>										·		
Installation Kits	565	65.3		415 46.6	300	33.3	213	28.5											1493	173.6
Installation Kits Nonrecurring																				
Equipment						,				•										
Equipment Nonrecurring	****	6.																		1.9
Engineering Change Orders Data																				
Training Equipment																				
Support Equipment		0.2																		0.2
Other																		•		
Interim Contractor Support																				
										-										
Installation of Hardware																				
FY 1996 & Prior Eqpt Kits	193	1.8	210	2.3															403	4.1
FY 1997 Eqpt Kits					89	L													89	1.3
FY 1998 Eqpt Kits							23	0.		•									23	1.0
FY 1999 Eqpt Kits									88	4.8									88	1.8
FY 2000 Eqpt kits													- 				****			
FY 2001 Eqpt kits				_						_	_		-	_		_				
FY 2002 Eqpt kits			NOTE	Applica	ion quar	ıtities an	d costs	NOTE: Application quantities and costs reflect kits applied by field retrofit only.	ts applie	d by fie	ld retrof	t only.		Costs	Costs for ODS application	s applice	atlon			
FY 2003 Eqpt kits				during A	10-A2 re	manufa	cture an	AO-A2 remanufacture and A1-A2 conversion are reflected on their respective P-forms.	convers	slon are	reflected	d on the	ir respe	ctive P-	forms.					
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	193	1.8	210	2.3	89	1.3	53	1.0	88	1.8									612	8.2
Total Procurement Cost		69.3		48.9		34.6		29.5		1.8										184.0
						į	į	!			:	•	1	i	į	!		;		
METHOD OF IMPLEMEN I A I ION: Contractor/Depoviled refro.	: Contra	Ctor/Depo	DOT/TIBIG 7.	. 5	ADMINISTRATIVE LEADTIME:	SHANIS	IVE LEAI EV 1009:		2	6 N Mar oa	Months	. .	PHODUC	<u>z</u> <u>5</u> .	PHODUCTION LEADTIME:	JIME:	72	Months		
Contract Dates:		FY 1997.		Mar 98			F7 1990.		∠ ≥	Mar 90		. 4	FY 1999.		ž	Maron				
Delivery Date:		DD - L) S		-	1 1000		=	25		-	1 1000		IAI	a co				

Outputs

FY 1998 FY 1999

Inputs FY 2000 FY 2001

FY 2002 FY 2003 Outputs FY 2000 FY 2001

FY 1997

FY 1999

FY 1997 FY 1998

Inputs



Remarks:

FY 2002 FY 2003

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	INDIVIDUAL MODIFICATION		Date February 1997
MODIFICATION TITLE:	Transmission Electronic Controller (TEC) 1-90-05-4282	4282	
MODELS OF SYSTEMS AFFECTED:	M2A2/M3A2		
DESCRIPTION / JUSTIFICATION:			
The Transmission Electronic C directly improves transmission hot and cold performance, and	The Transmission Electronic Controller (TEC) replaces the hydromechanical transmission control with an electromechanical control. the TEC directly improves transmission maintainability and reliability. The control features of TEC will provide improved acceleration, fuel utilization and hot and cold performance, and better low speed maneuverability.	smission control with an elect of TEC will provide improved	romechanical control. the TEC I acceleration, fuel utilization anc
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTON	VELOPMENT MILESTONES:	PI ANNED	ACCOMPLISHED
Preliminary Design Review:	 	NA	
Critical Design Review:		ΑΝ	
Contractor Test and Evaluation:	uation:	NA	
Development Test and Evaluation:	valuation:	NA	
Inital Operational Test and Evaluation:	d Evaluation:	٩٧	
IPR Production Decision		2094	2094
TDP Available:		2094	2094



Inetallation Schoolile.		Transmission Flactionic Controller (TEC)	o cio		1007	200	oller	TEC		1-90-05-4282	S S					أ أ	oteC		Februs	February 1997					
	6	2	FY 1997	997			FY 1998	998		2	-52 FY 1999	66(FY 2000		}		FY 2001	· -					
	& Prior	- -i	СI	ଚା	41	-	য	ල I	41	-	C I	(C)	41	-	CI	m	41	-	CI	83	41				Total
Inputs																									
FY 1996 & Prior	28	9/	92	9/	77																				33
FY 1997						77	9/	9/	27																256
FY 1998									22	89	89	4													237
FY 1999												24	89	28	28										208
Outputs																									
FY 1996 & Prior	76	29	68	89	54																				333
FY 1997					12	61	61	61	61																256
FY 1998										90	29	29	29												237
FY 1999														25	25	25	25								208
			FY 2000	ō			FY 2001	+ -		-	FY 2002	۸.		ш	FY 2003			Ţ	FY 2004			FY 2005	900		
		-	Ø	က	4	-	8	က	4	-	2	က	4	-	8	ო	4	-	8	က	4	-	2	ဗ	4 Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Remarks:																									
	Installa	Installation occurs during application of ODS mods by contractor & depot.	urs du	ring ap	plicatio	n of OD	S mod	by cor	itractor	& depo	نہ														

	INDIVIDUAL MODIFICATION Date Fe	February 1997
MODIFICATION TITLE:	OI Backup Sights/Periscopes 1-86-05-4115	
MODELS OF SYSTEMS AFFECTED:	M2A2/M3A2	
DESCRIPTION / JUSTIFICATION:		
This materiel change will add a filter to the prese protection for the crew against near-term lasers.	This materiel change will add a filter to the present configuration of the Unity Vision Block (periscopes) and the Backup Sight to provide eye protection for the crew against near-term lasers.	ide eye

	CHINA
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	

ACCOMPLISHED 2Q87	3Q87	4088	2088	NA		3090
2Q87	3Q87	4088	2088	NA	4089	2090
Preliminary Design Review:	Critical Design Review:	Contractor Test and Evaluation:	Development Test and Evaluation:	Inital Operational Test and Evaluation:	IPR Production Decision	TDP Available:

						INDIVIC	UAL MC	INDIVIDUAL MODIFICATION	TION							Date		Febru	February 1997	
MODIFICATION TITLE (Cont):		$ \check{\ } $	Ol Backup Si	kup (Sights	/Peris	cobes	ights/Periscopes 1-86-05-4115	5-4115											
FINANCIAL PLAN: (\$ in Millions)	FY	FY 1996	_																	
	and	and Prior	Ĕ	6	Н	160	Н	199	년	FY 2000	FY;	FY 2001	FY	FY 2002	FY 2003	5003	TC	0	TOTAL	TAL
	ð	8	₹	₩	₹	*	ð	\$	ð	↔	ģ	\$	ą	ક્ર	o O	\$	Qty	\$	Ωty	\$
RDT&E																				
PROCUREMENT Kit Quantity																				
Installation Kits	2499	17.8	~			-		.,								•			2499	17.8
Installation Kits Nonrecurring						<u> </u>														
Equipment																				
Equipment Nonrecurring																			-	
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware				-																
FY 1996 & Prior Eqpt Kits	1678	1.7	821	1 0.7	۲:														2499	2.4
FY 1997 Eqpt Kits																				
FY 1998 Eqpt Kits																				
FY 1999 Eqpt Kits																				
FY 2000 Eqpt kits																				
FY 2001 Eqpt kits																				
FY 2002 Eqpt kits																				
FY 2003 Eqpt kits																				
(FY(TC) Eqpt (xx kits)					_															
Total Installation Cost	1678	1.7	7 821		0.7														2499	2.4
Total Procurement Cost		19.5	15	0	0.7															20.2
METHOD OF IMPLEMENTATION: Contractor fleid teams	V: Contra	ctor fle	old team			MINISTE	ATIVE!	ADMINISTRATIVE LEADTIME:	ښ				PRODU	JCTION	PRODUCTION LEADTIME:	.IME:				
Contract Dates:		FY 1997:	:26	Jun 97	97		7	FY 1998:					FY 1999:	ö						
Delivery Date:		FY 1997:	97:				FY 1998:	:866					FY 1999:	.i						



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	INDIVIDUAL MODIFICATION		Date Febru	February 1997
MODIFICATION TITLE:	ACU Pillow Block Mod 1-91-05-4314			
MODELS OF SYSTEMS AFFECTED:	TOW 2 SUBSYSTEM			***************************************
DESCRIPTION / JUSTIFICATION:				
This block modification combines 5 class 1 ECPs modifications will seal against moisture and elimin weapon system package.	This block modification combines 5 class 1 ECPs into a consolidated block ACU package. The ACU is part of the TOW missile launcher. These modifications will seal against moisture and eliminate pillow block associated damage to the ACU which can result in critical failures of the TOW weapon system package.	ckage. The ACU is part o ge to the ACU which can	if the TOW missile launche result in critical failures of	r. These the TOW
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	:VELOPMENT MILESTONES:	ANNED	ACCOMPLISHED	
Preliminary Design Review:	ew:	NA	NA	
Critical Design Review:		NA NA	NA	
Contractor Test and Evaluation:	luation:	NA A	NA	
Development Test and Evaluation:	valuation:	NA	NA	
Inital Operational Test and Evaluation:	nd Evaluation:	ΥN	ΝΑ	
IPR Production Decision		1092	1092	
TDP Available:		NA V	NA	, <u>, , , , , , , , , , , , , , , , , , </u>

					INC	/Naivi	IL MOD	INDIVIDUAL MODIFICATION	NO							Date		Febru	February 1997	
MODIFICATION TITLE (Cont):		Y	U.	low B	ACU Pillow Block Mod 1-91-05-4314	od 1-	91-05-	4314												
FINANCIAL PLAN: (\$ in Millions)	FY 1996	\ \g																		
	and Prior	rior	FY 1997	997	FY 1998	966	Ŧ	FY 1999	FY 2000	000	FΥ	FY 2001	FY	FY 2002	F	FY 2003		10	TOTAL	Ā
L	È	æ	δ	8	ð	69	ਣੇ	\$	ð	49	ð	€9	₹	8	ੈਂ	8	δ	8	Qţ	8
PBOCI IDEMENT																-				
Kit Quantity			•																	
Installation Kits																-				
Installation Kits Nonrecurring																				
Equipment	4275	4.4																	4275	7
Equipment Nonrecurring										•	·					_			Ŷ,	ř
Engineering Change Orders																				
Data																				
Training Equipment										_										
Support Equipment									•											
Other										*.										
Interim Contractor Support																				
			-																	
Installation of Hardware																				
FY 1996 & Prior Eapt Kits	1874	C.	1335	C	1066	0											_		ļ	0
FY 1997 Eqpt Kits		}			}	;													42/5	2.8
FY 1998 Eqpt Kits					-						•									
FY 1999 Eqpt Kits		_																		
FY 2000 Eqpt kits																				
FY 2001 Eqpt kits												•		٠			,			
FY 2002 Eqpt kits																				-
FY 2003 Eqpt kits					_															
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	1874	1.3	1335	6.0	1066	0.7													4275	2.8
Total Procurement Cost		5.7		6.0		0.7														7.2
METHOD OF IMPLEMENTATION: Contractor teams	Contracto	r team		1	ADMINIS	STRAT	VE LE/	TIME					PRODL	PRODUCTION LEADTIME:	LEADT	IME:				
Delivery Date:	ב ב	FY 1997: FY 1007:	_	rep 9/			FY 1998: EV 4009:		35827				FY 1999:	<i>.</i>						
coment care.		1997.					1880						FY 1999:	;						

Installation Schedule: ACU Pillow Block Mod 1-91-05-4314	le: A	SU Pill	low Bi	ock M	0d 1	91-05	4314	,						Í		Date			February 1997	266					
	FY 1996 & Prior	₩	FY 1997 2 3	99. 13	41	⊣	FY 1998 2 3		41	-	FY 1999 2 3	41	- 1	<u>⊤</u> 21	FY 2000 2 3	4	┯	i α	FY 2001 2 3	41					Total
Inputs FY 1996 & Prior FY 1997 FY 1998 FY 1999	1874	334	334	334	333	267	ဖ	1 5	99																4275
Outputs FY 1996 & Prior FY 1997 FY 1998 FY 1999	1874	334	334	334	333	267	566	267	266																4275
		-	FY 2000 2	e C	4	<u>г</u>	FY 2001 2	ო	4	∓	FY 2002 2	ო	4	FY 2003 1 2		, 6	4	FY 2004	2004	4	-	FY 2005 2	3	4	Total
Inputs FY 2000																									
FY 2001 FY 2002 FY 2003																									
şir																	•								
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Remarks:																									

	INDIVIDUAL MODIFICATION		Date Cohman 1007	007
MODIFICATION TITLE:	Vehicle Intercom System 1-90-05-4284			/66
MODELS OF SYSTEMS AFFECTED:	A2 ODS M2/M3			
DESCRIPTION / JUSTIFICATION:				
The VIS system is a replacem well as access to the vehicle r	The VIS system is a replacement for the AN/VIC-1 intercom system. It is a digital intercom system which provides internal communications as well as access to the vehicle radios. This is a non-developmental item to be applied to the A2 ODS vehicles.	ercom system which provide to the A2 ODS vehicles.	ss internal communication	s as
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILEST	ONES:			
Preliminary Design Review:		PLANNED A	ACCOMPLISHED NA	
Critical Design Review:	Z	NA	NA	
Contractor Test and Evaluation:	uation:	A	NA	
Development Test and Evaluation:	valuation:	A	NA	
Inital Operational Test and Evaluation:		2Q95	2095	
IPR Production Decision		3Q95	3095	
TDP Available:	NA	∢	Ϋ́	

fication

					INDI	VIDUAL	MODIF	INDIVIDUAL MODIFICATION							۵	Date		Febru	February 1997	
MODIFICATION TITLE (Cont):		<u>چ</u>	hicle	nterco	m Sys	Vehicle Intercom System 1-90-05-4284	-90-05	-4284												
FINANCIAL PLAN: (\$ in Millions)	EV 1006	900																		
	and Prior	-Jel	FY 1997	161	FY 1998	86	FY 1999	Н	FY 2000	H	FY 2001	Н	FY 2002	Н	FY 2003	503	15	1 1	TOTAL	
	Qţ	\$	Qţ	€	ğ	\$	Q Q	\$	Q Ş	• •	Qţ Q	\$	δ	S	ð	\$	ਣੇ	છ	ð	€>
PROCUREMENT Kit Quantity Installation Kits Installation Kits Nonrecurring Equipment Nonrecurring Equipment Nonrecurring Equipment Nonrecurring Equipment Nonrecurring Equipment Support Installation of Hardware APPLICATION SCHEDULED AND BUDGETED AS PART OF FY 1996 & Prior Eqpt Kits FY 1999 Eqpt Kits FY 2002 Eqpt Kits FY 2002 Eqpt Kits FY 2003 Eqpt Kits FY 2003 Eqpt Kits FY 2003 Eqpt Kits FY 2003 Eqpt Kits FY 2004 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits	S53	8.5 DGETE	262 D AS PA	3.4 WRT OF	A2 OD	218 2.2 A2 ODS APPLICATION	ICATIO	z						`					1033	14.0
Total Installation Cost		8		3.4		2.2	\dagger	\dagger	\dagger		-	\dagger	-	\dagger	_	\dagger				14.0
METHOD OF IMPLEMENTATION: Contractor/Depot Contract Dates: Delivery Date: FY 1997:	4: Contrac	ctor/Depo FY 1997: FY 1997:	1		DMINIS		IVE LEA! FY 1998: FY 1998:	DTIME:	20	6 M Mar 98 Sep 98	Months	- Crr	PRODUCTION LEADTIME: FY 1999: Mar 99 FY 1999: Sep 96	TION	EADTI Ma Se	OTIME: Mar 99 Sep 99	9	Months		

Installation Schedule:	Je: Ve	hicle	Interc	om S	ysten	ղ 1-9 ն	Vehicle Intercom System 1-90-05-4284	284								Date		"	February 1997	397				
	FY 1996		FY 1997	266			FY 1998	986			FY 1999	36			FY 2000			Ŧ	FY 2001					
	& Prior	ᠳ	αŧ	က	41	-	C I	(C)	41	- -	QI	6	4	•	8	4	-	~	m	4				Total
Inputs																ſ		ı	×	1				ļ
FY 1996 & Prior	28	2	70	2	7	84	84	92																
FY 1997								œ	84	89	8	34												•
FY 1998								,		}	3	. 4	g	ď	ď									7,07
FY 1999												5	3	3	3									·V
Outputs																								
FY 1996 & Prior	28	2	92	20	7	8	84	92																u
FY 1997								80	84	89	89	34												000
FY 1998												6	0	0	9									V.
EV 1000												ţ	8	o C	8									C/I
		_	FY 2000	_			FY 2001			Ē	FY 2002			Ŧ	FY 2003			FY 2004	40		Ā	FY 2005		
		-	N	က	4	-	8	က	4	-	01	ဇ	4	_		ر س	4	2	e	4	-	~	œ	4 Total
Inputs																					•	1	•	
FY 2000																								
FY 2001																								
FY 2002																								
FY 2003																								
Outputs																								
FY 2000																								
FY 2001																								
FY 2002																								
FY 2003																								
Remarks:																								

	INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	DECA 1-93-05-4441			
MODELS OF SYSTEMS AFFECTED:	M2A2/M3A2			
DESCRIPTION / JUSTIFICATION:				
The DECA is the microprocessor based controller subsystem to execute a specific task. The DECA reliability and elimination of hull and turret gyro.	or based controller of the turret drive system. It transfers signals from crew and sensor inputs to the appropriate ic task. The DECA replaces the Electronic Control Assembly (ECA) and provides built in testing, improved il and turret gyro.	isfers signals from crew and sasembly (ECA) and provides	sensor inputs to the a s built in testing, impr	ppropriate oved
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	VELOPMENT MILESTONES:	GHNNA	ACCOMBI ISHED	
Preliminary Design Review:		NA		
Critical Design Review:		NA		
Contractor Test and Evaluation:	Jation:	NA		
Development Test and Evaluation:	raluation:	NA		
Inital Operational Test and Evaluation:	d Evaluation:	NA		
IPR Production Decision		3Q89	3089	

3089

3089

TDP Available:

lication

Installation Schedule: DECA 1-93-05-4441	<u> </u>	ج ا	-93-0	5-44	#												Date		Feb	February 1997						
	FY 1996		Ŧ	FY 1997			ΕŢ	FY 1998			FY 1999	666			FY 2000	8			FY 2001	5						
	& Prior	┥	CNI	က	41	-	Ø	က	41	-1	O#	വ	41	-	CII	ကျ	41	-	01	coj	41				•	Total
Inputs	Ċ							6																		2
FY 1996 & Prior	97	S S	8	9	9	9	†																			420
FY 1997									27	75	75	24	Ø													233
FY 1998													25	8												54
FY 1999														5	23											104
Outputs																										
FY 1996 & Prior	56	22	30	30	30	84	8	84	57																	450
FY 1997									27	75	75	54	8													233
FY 1998													25	8												54
FY 1999														51	23											104
								•																		
			FY 2000	2			FY 2001	5			FY 2002	QI		ш.	FY 2003				FY 2004			-	FY 2005			
		-	7	က	4	_	7	က	4	-	8	က	4	-	0	က	4	-	8	က	4	-	8	က	4	Total
Inputs																										
FY 2000																										
FY 2001																										
FY 2002																										
FY 2003																										
Outputs																										
FY 2000																										
FY 2001																										
FY 2002																										
FY 2003																										
Remarks:																										

	INDIVIDUAL MODIFICATION Date February 1997	
MODIFICATION TITLE:	HALON Replacement 1-92-05-4422	
MODELS OF SYSTEMS AFFECTED:	Bradley Fighting Vehicle System	
DESCRIPTION / JUSTIFICATION:		
The Halon replacement program is in response to program will provide an alternate agent to use in t	The Halon replacement program is in response to DOD and Army policy to eliminate the unnecessary release of Halon into the atmosphere. This program will provide an alternate agent to use in the BFV engine compartment fire extinguishers.	This

DEVEL OBMENT	ETATIE / MA 10B DEVIT OBJECT: 111 TOTOLICO		
ביירוני ושניו	DEVELO WELL STATES MASON DEVELOTMENT MILESTONES:		
<u>.</u>	Preliminary Design Review:	3Q95	ACCOMPLISHED 1Q96
J	Critical Design Review:	4096	1Q97
J	Contractor Test and Evaluation:	NA	NA.
u	Development Test and Evaluation:	4096	
=	Initial Operational Test and Evaluation:	NA	NA
=	IPR Production Decision	2097	
₹.	Approve ECP:	2097	

ication

Exhibit P-3a Individua

				ND	IVIDUA	L MODI	INDIVIDUAL MODIFICATION	2						Date		۳	February 1997		
MODIFICATION TITLE (Cont):		HALOI	HALON Replacement 1-92-05-4422	aceme	nt 1-92	2-05-4	422								,				
FINANCIAL PLAN: (\$ in Millions)	FV 1996	-							!										
	E	Ĕ	FY 1997	FY 1998	866	FY 1999	666	FY 2000	20	FY 2001	11	FY 2002	2	FY 2003]	TC	F	TOTAL	
	œ Ž	₹	€	ਣੇ	\$	ğ	es S	Qty.	\$	Qty	\$	Ofy.	\$	∂	S S	\$	ਰੈ	_	8
RDT&E										_			-					-	
PROCUREMENT									•										
Kit Quantity																			
Installation Kits																			
Installation Kits Nonrecurring				467	4.9						-		-		62	6257 70	70.6 6724	_	75.5
Equipment																			
Equipment Nonrecurring																			
Engineering Change Orders	77												-						
Data	4.3	6	1.0																5.3
Training Equipment								•							,,,,,,,			··-··	
Support Equipment																			
Other																			
Interim Contractor Support					_														
installation of Hardware																· ·			
EV 1006 9 Drive East : Kits						_					•								
TY 1990 & FIIO EQUI NIS																			
FY 1997 Eqpt Mils											-								
FY 1999 Funt Kite					····														
EV 2000 East kits																			
FY 2001 Eapt kits								•						-					
FY 2002 Eqpt kits								<u> </u>											
FY 2003 Eqpt kits													_					-	
(FY(TC) Eqpt (xx kits)	-									_								-	
		_							-	-			-		-	-			
Total Procurement Cost	4.3		1.0		4.9			$\left \cdot \right $	H	H	H		H	H	$\left \cdot \right $	102	9.02		80.9
					į	į	1			;	İ								
METHOD OF IMPLEMENTATION: Contractor teams Contract Dates:	: Contractor team FY 1997:	ams 97:	Aug 97	ADMINISTRATIVE LEADTIME: '	SIHAII	IVE LEAI FY 1998:	DIME	Ž	6 Mo Mar98	Months	ā û	PRODUC	ION LE	PRODUCTION LEADTIME: EV 1999:	:: 72	Months	St		
Delivery Date:	FY 1997:	:26	N V V			FY 1998:		X V	.		Ĺ	FY 1999:							

Installation Schedule: HAI ON Benjacement 1,02 05,4400	06 4400											
5	-03-442.C FV 1008	·	1000		i	Date		February 1997	1997			
+	000 - 0	4			Ž		•	Š	•			
† †	K	-1		⊣	II II	41	Н	NI MI	4 1			Total
FY 1996 & Prior												
FY 1997												
FY 1998		4	467									,
FY 1999								-				46/
Outputs												
FY 1996 & Prior												
FY 1997												
FY 1998		4	467									•
FY 1999		•	i									467
FY 2000	FY 2001	FY	FY 2002		FY 2003		ш.	FY 2004		FY 2005		
1 2 3 4	1 2 3	1	2	4		6 4	-	3	4		ŕ	Total
Inputs							•			J	,	
FY 2000												
FY 2001												
FY 2002												
FY 2003												
	•											
Outputs							١,					
FY 2000											4	
FY 2001							-					
FY 2002												
FY 2003												
Remarks:												
Procurement contract includes cost to apply mod by contractor team	ply mod by contractor	team.										



cation

	INDIVIDUAL MODIFICATION		Date February 1997
MODIFICATION TITLE:	Armor Tiles 1-84-05-4038		
MODELS OF SYSTEMS AFFECTED:	M2A2(IFV)/M3A2(CFV)		
DESCRIPTION / JUSTIFICATION:			
Armor tiles are one of the High Suincluding hand held heat and othe the vehicle front, sides and turret.	Armor tiles are one of the High Survivability improvements to the BFVS. The tiles provide increased armor protection for shaped charge threats, including hand held heat and other classes of warheads as specified in the BFVS material need area. There are 5 configurations of tiles covering the vehicle front, sides and turret.	provide increased armor p material need area. There	protection for shaped charge threats, are 5 configurations of tiles covering
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	/ELOPMENT MILESTONES:		
Preliminary Design Review:	,	PLANNED	ACCOMPLISHED
Critical Design Review:		3Q90	3Q90
Contractor Test and Evaluation:	Jation:	NA	
Development Test and Evaluation:	aluation:	NA A	
Inital Operational Test and Evaluation:	d Evaluation:	NA	
IPR Production Decision		2092	2093
TDP Available:		NA	

					Z) NIVIDO N	AL MOL	INDIVIDUAL MODIFICATION	S O							Date		Febr	February 1997	
MODIFICATION TITLE (Cont):		Ā	rmor 1	Armor Tiles 1-84	-84-05	-05-4038														
FINANCIAL PLAN: (\$ in Millions)	FY 1996	960																		
	and Prior	, io	FY 1997	1997	FY1	FY 1998	F	FY 1999	실	FY 2000	F	FY 2001	F	FY 2002	FY	FY 2003	1 1	2	P	TOTAL
	₹	S	₹	æ	ð	s	₹	6	₹	8	ð	8	ð	æ	ð	69	ð	49	ਰੇ	\$
RDT&E PROCUREMENT	-	4.0																		4.0
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment	142	34.3	40	33.0															246	67.3
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment					*****															
Support Equipment																				
Other		6.7		2.5		_														9.5
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt Kits																				
FY 1997 Eqpt Kits																				
FY 1998 Eqpt Kits																				
FY 1999 Eqpt Kits																				
FY 2000 Eqpt kits																				
FY 2001 Eqpt kits																				
FY 2002 Eqpt kits																				
FY 2003 Eqpt kits																				
(FY(TC) Eqpt (xx kits)		1		Ì																
Total Installation Cost		1																		
Total Procurement Cost		41.0		35.5									_]							76.5
METHOD OF IMPLEMENTATION: Troop Installed	l: Troop Ir	stalled		` { :	ADMIN	STRAT	IVE LE	ADMINISTRATIVE LEADTIME:	úi	9	Months		PRODU	JCTION	PRODUCTION LEADTIME:	IME:	9	Months		
Contract Dates: Delivery Date:		FY 1997: FY 1997:		Mar 97			FY 1998: FY 1998:						FY 1999: FY 1999:							

Post of Coloring			A 100 t 2011	9	900																				
	5	= 5	EV 1997	- - - -	5		FY 1998	œ			FY 1999	_		ú	FY 2000	Cale		ī	FY 2001	66					
-	& Prior		. 01		41	ᅱ	. aı		4 4	- 73	. Si	41	-	· 01	8	41	-	- 01	G (2)	41					Total
Inputs FY 1996 & Prior																						*			
FY 1997																									
FY 1998 FY 1999																									
Outputs																									
FY 1997																									
FY 1998																									·
FY 1999																									
		Ĺ	FY 2000			ĬĹ	FY 2001			Ŧ	FY 2002			FY 2003	6003			FY 2004	304			FY 2005	2		
		-	8	ო	4	-	01	ო	4	-	8	က	4	_	8	້ ຕ	4	-	8	3 4	_	Ø	က	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Remarks:																									
	Armor Tiles will be installed by troops.	es will I	oe instal	led by	roops.																				

	INDIVIDUAL MODIFICATION		Date February 1997
MODIFICATION TITLE:	Engine Access Door Lift 1-92-05-4421		
MODELS OF SYSTEMS AFFECTED:	M2A2(IFV)/M3A2(CFV)		
DESCRIPTION / JUSTIFICATION:			
This is the last of a group of fo Mechanism is a redesigned pu	This is the last of a group of four modifications to correct four deficiencies identified during Desert Storm. The Engine Access Door Lift Mechanism is a redesigned pump to eliminate failures encountered when raising the armored engine access door.	ed during Desert Storm. The the armored engine access	Engine Access Door Lift door.
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	/ELOPMENT MILESTONES:		
Preliminary Design Review:	<u> </u>	PLANNED 1Q92	ACCOMPLISHED 1Q92
Critical Design Review:		2092	2092
Contractor Test and Evaluation:	Jation:	3092	3Q92
Development Test and Evaluation:	aluation:	3Q92	3Q92
inital Operational Test and Evaluation:	d Evaluation:	3092	3Q92
IPR Production Decision		3Q94	3Q94
TDP Avallable:		3Q94	3Q94

					Z	DIVID	AL MO	INDIVIDUAL MODIFICATION	NOI							Date		Febr	February 1997	
MODIFICATION TITLE (Cont):		Ш	gine /	Acces	s Do	or Lift	1-92-(Engine Access Door Lift 1-92-05-421	-				:							
FINANCIAL PLAN: (\$ in Millions)	EV 1996	٦																		
	and Prior) b e	FY 1997	\$	Ě	FY 1998	É	FY 1999	Ěŧ	FY 2000	Œ ĝ	FY 2001	Œ È	FY 2002	ξ	FY 2003	Ž) 10 4	0 30	TOTAL
RDT&E PROCUREMENT Kit Quantity Installation Kits Installation Kits Nonrecurring Equipment Equipment Nonrecurring Engineering Change Orders Data Training Equipment Support Equipment Other Interim Contractor Support FY 1995 & Prior Eqpt Kits FY 1999 Eqpt Kits FY 1999 Eqpt Kits FY 1999 Eqpt Kits FY 2000 Eqpt Kits FY 2000 Eqpt Kits FY 2000 Eqpt Kits FY 2000 Eqpt Kits FY 2001 Eqpt Kits FY 2003 Eqpt Kits FY 2003 Eqpt Kits FY 2003 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2005 Eqpt Kits FY 2007 Eqpt Kits FY 2007 Eqpt Kits FY 2007 Eqpt Kits FY 2007 Eqpt Kits	A A A A A A A A A A A A A A A A A A A	9. SO SO SO SO SO SO SO SO SO SO SO SO SO	000	, RLFT		APPLIO	ATION ATION	<u> </u>	EDULE	AND E	n D G E	<u> </u>	41-A2 C	O NVE	S NOISI	ND A20	MOD APPLICATION IS SCHEDULED AND BUDGETED IN A1-A2 CONVERSION AND A2ODS MOD	1	5000	, , , , , , , , , , , , , , , , , , ,
Total Procurement Cost		2.6	T																	2.6
METHOD OF IMPLEMENTATION: Contractor & debot Contract Dates: Delivery Date: FY 1997:	: Contracto FY FY	ctor & dei FY 1997: FY 1997:	pot		ADMI	\ISTR	TIVE LEAU FY 1998: FY 1998:	ADMINISTRATIVE LEADTIME: FY 1998: FY 1998:	ij				PRODUC FY 1999: FY 1999:	PRODUCTION LEADTIME: FY 1999: FY 1999:	'LEAD	TIME:			,	

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P-3a
Exhibit F
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Installation Schedule:		gine	Engine Access Door Lift 1-92-05-4421	is Doc	ır Lift	1-92-(35-442	<u> </u>								Date		Febru	February 1997					Γ
	~)	FY 1997	266			FY 1998	86		u	FV 1999	σ		Ú	EV 2000			EV 2004	` =					
	& Prior		. 01	(7)	41	-		ල 	ঝ		. Q	ξ (Ω) -44	-		S 6	4	-	- - 01		4				Total
Inputs FY 1996 & Prior	26	141	141	1 4	141	1 4	141	141	14	141	141 1	141	141 14	141 141										2000
FY 1997 FY 1998																								
FY 1999																								
Outputs																								
FY 1996 & Prior	26	141	141	141	141	141	141	141	141	141	141	141	141 14	141 141										2000
FY 1997																								
FY 1998																								
			FY 2000	c		ı.	FY 2001			Ę.	FY 2002			FY 2003	003		ш	FY 2004			FY 2005	05		
		_	81	က	4	-	8	က	4	-	8	က	4	-	2 3	4	-	2	က	4	1 2	ო	4	Total
Inputs																								
FY 2000																								
FY 2001																								
FY 2002																								
FY 2003																								
Outputs																								
FY 2000																								
FY 2001																								
FY 2002																								
FY 2003																								
Remarks:]												

Modification	
Individual	
Exhibit P-3a	

	INDIVIDUAL MODIFICATION		Date February 1997	y 1997
MODIFICATION TITLE:	TOW Subsystem Support Equipment 1-90-05-4300			
MODELS OF SYSTEMS AFFECTED:	TOW 2 SUBSYSTEM SUPPORT EQUIPMENT			
DESCRIPTION / JUSTIFICATION:				
This modification combines 20 support equipment and bring a user awareness of handling/liff	This modification combines 20 class 1 ECPs into a consolidated Block modification which will expand the capabilities and life cycle of the TOW support equipment and bring all assets to a uniform configuration. Benefits include reduced diagnostic spares, improved reliability, and improved user awareness of handling/lifting restrictions of MIL-STD-1472C.	rhich will expand the duced diagnostic spa	capabilities and life cycle of th ıres, improved reliability, and i	e TOW nproved
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		PI ANNED	ACCOMPLISHED	
Preliminary Design Review:		NA	NA	
Critical Design Review:		NA	NA	
Contractor Test and Evaluation:	luation:	NA	Ν	
Development Test and Evaluation:	valuation:	NA	NA .	
Inital Operational Test and Evaluation:	nd Evaluation:	NA	¥Z	
IPR Production Decision		1092	1092	
TDP Available:		NA	W	
V				



installation Schadule.	TOW Subsystem Support Equipment 1.90-05-4300	Suber	etom.	Ü	T to	qi	t tuor	d	5-430							oteC		1 a	Fehruary 1997	197					
ш.	÷		FY 1997	5		. iL	FY 1998	3			FY 1999			Ŧ	FY 2000			F	FY 2001	į					
	& Prior 1	્યા	ଚା	41	=		(C)	41	+	ત્રા	(0)	41	+1	NI.	ମ	41	H	C)	ଜା	41					Total
Inputs																									
FY 1996 & Prior																									
FY 1997							_	75 7	75 7	75 90	93 93	3 93	93	~											597
FY 1998																									
FY 1999																									
,																									
Outputs																									
FY 1996 & Prior				•																					
FY 1997				,			,	75 7	75 7	75 93	93 93	3 93	93	~											597
FY 1998																									
FY 1999																									
		200	6			ì	Š			200	. 6			ì	ç			,	;			000			
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Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																						•			
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Remarks:																									
																									İ

	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	TOW Mod for AO BFVS 1-96-05-4510		

M2AO(IFV)/M3AO(CFV)

MODELS OF SYSTEMS AFFECTED:

DESCRIPTION / JUSTIFICATION:

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

This modification is for procurement and application of modification kits to the Bradley AO TOW Subsystem (TSS) and associated TOW subsystem Test Sets (TSS-TS) to provide the capability to fire and guide the TOW 2 family of missiles. This mod increases system lethality by incorporating optimized flight algorithms for the TOW 2A and TOW 2b missiles when fired from Bradley AO vehicles.

PLANNED ACCOMPLISHED NA NA	NA		NA	NA	NA NA	4096 4096
Preliminary Design Review:	Critical Design Review:	Contractor Test and Evaluation:	Development Test and Evaluation:	Inital Operational Test and Evaluation:	IPR Production Decision	TDP Available:

ication

Exhibit P-3a Individua

				NON	DUAL M	INDIVIDUAL MODIFICATION	NO	İ					Date		Febru	February 1997	
MODIFICATION TITLE (Cont):		TOW Mod for		AO BF	/S 1-96	AO BFVS 1-96-05-4510											
FINANCIAL PLAN: (\$ in Millions)	EV 1996	-															
	d Pri	FY 1997	H	FY 1998	L	FY 1999	FY 2000	000	FY 2001	101	FY 2002	-	FY 2003		10	TOTAL	AL
	Oty \$	δ	8	δţ	\$	\$	ਰੈਂ	€	ĝ	છ	δ	ξ S	\$ A	ð	\$	Δţσ	છ
RDT&E																	
PROCUREMENT																	
Kit Quantity																-	
Installation Kits																	
Installation Kits Nonrecurring		•	-														
Equipment	369 10.7															369	10.7
Equipment Nonrecurring																	
Engineering Change Orders									_,								
Data																	
Training Equipment																	
Support Equipment	2.4																2.4
Other						,											
Interim Contractor Support				- 4													
			••••						- , . ,							.	
Installation of Hardware																	_
FY 1996 & Prior Eant Kits																	
FY 1997 Eqpt Kits	-												·				
FY 1998 Eqpt Kits																	
FY 1999 Eqpt Kits																	
FY 2000 Eqpt kits					-												
FY 2001 Eqpt kits																	
FY 2002 Eqpt kits																•••	
FY 2003 Eqpt kits																	
(FY(TC) Eqpt (xx kits)																-	
Total Installation Cost																	
Total Procurement Cost	13.1				-					\dashv							13.1
METHOD OF IMPLEMENTATION: Contractor Contract Dates:	: Contractor FY 1997:	:26	Q	DMINIS	RATIVE FY	ADMINISTRATIVE LEADTIME: FY 1998:	ய்	5	Months	<u> </u>	PRODUCTION LEADTIME: FY 1999:	ION LE	ADTIME:	5	Months		
Delivery Date:	FY 1997:	;;			Ε¥	FY 1998:		İ		ا "	FY 1999:			ĺ			





	INDIVIDUAL MODIFICATION		Date February 1997	1997
MODIFICATION TITLE:	A2 Card Retrofit 1-96-05-4517			
MODELS OF SYSTEMS AFFECTED:	TOW 2 Subsystem (T2SS) Missile Guidance System (MGS)	(MGS)		
DESCRIPTION / JUSTIFICATION:				
The relay/squib circuit card as flight status and modes of ope WIRECUT squib control signa the A2 CCA to increase the sp	The relay/squib circuit card assembly (CCA) controls the power up/power down functions of the MGS and provides indications of missile launch, flight status and modes of operation. It also generates the PREFIRE and FIRE squib control signals required to launch the missile and the WIRECUT squib control signal used to cut the missile quidance wires. This mod will add a semiconductor device diode across resistor "R39" on the A2 CCA to increase the speed of discharge for capacitor C21 and to prevent an inadvertent missile launch.	ions of the MGS and procontrol signals required add a semiconductor de nadvertent missile launc	ovides indications of missile I to launch the missile and the vice diode across resistor "R th.	aunch,
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		ANNED DENNED	ACCOMPLISHED	
Examples Preliminary Design Review:		N/A	N/A	
Critical Design Review:		N/A	N/A	
Contractor Test and Evaluation:	luation:	N/A	N/A	
Development Test and Evaluation:	valuation:	N/A	N/A	· ·······
Inital Operational Test and Evaluation:	nd Evaluation:	N/A	N/A	
IPR Production Decision		Oct-96	Oct-96	
TDP Available:		Oct-96	Oct-96	

ication

Installation Schedule:		ard	A2 Card Retrofit 1-96-05-4517	it 1-9(3-05-4	1517								ŀ		Date	۰		Feb	February 1997	×					
	19		FY 1997	71			FY 1998	86			FY 1999	66			FY 2000	o			FY 2001	101						
		-	C)I	ଚା	41		0 1	m	41	ч	0 1	co)	41	 1	O.I	ଚା	41	-	CNI	ଚ	41					Total
Inputs FY 1996 & Prior							i d	Ş																		6
FY 1997					009	900	900	601	7.5	214	214	214														857
FY 1999																										
Outputs																										
FY 1996 & Prior																										
FY 1997		009	009	009	601																					2401
FY 1998						215	214	214	214																	857
FY 1999																										
		Ĺ	FY 2000			Ľ	FY 2001			Ĺ	FY 2002			Œ	FY 2003			т	FY 2004				FY 2005	2		
		-	8	က	4	-	8	က	4	-	2	ဇ	4	-	8	က	4	-	N	က	4	-	N	က	4	Total
Inputs																										
FY 2000																										
FY 2001																										
FY 2002																										
FY 2003																										
Outputs																										
FY 2000																										
FY 2001																										
FY 2002																										
FY 2003													į												:	
Remarks:																										
	Procurement cost includes cost to apply by contractor retrofit teams.	ent co	st inclu	des co	st to ap	ply by c	ontract	tor retro	fit team	ý																

		BIIDGET ITEM IIISTIEICATION GUEET	TIELCATION OF	<u> </u>		рате		
	200	GET ITEM 503	IIIICA IION SI				February 1997	
APPROPRIATION / BUDGET ACTIVITY	GET ACTIVITY			P-1 ITEM NOMENCLATURE	LATURE			
PROCUREMENT OF	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	BT VEHS /Tracked C	ombat Vehicles		HOWITZER, I	HOWITZER, MED SP FT 155MM M109A6 (MOD) (GA0400)	MM M109A6 (MC	OD) (GA0400)
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	EV 2003
QUANTITY							300	
COST (in millions)	282.0	105.9	18.7	11.5	4.4	0.0	0.0	0.0

DESCRIPTION: Funds the procurement of approved modifications to the 155MM M109 Self-Propelled Howitzer (See detailed description/justification on following exhibit P-3A),

COOPERATIVE AGREEMENTS:

system developer, BMY, a Division of Harsco Corporation, was awarded a full scale engineeering development contract in October 1985, and a low Production Division) won a competitive multiyear procurement contract for full scale production of remaining Paladin requirements during FY 1993-Paladin. The U.S./Israeli Joint Development Agreement has expired effective with the Paladin Milestone III Full Scale Production Decision. The The Government of the United States of America, as represented by the Department of the Army (DA), and the Government of Israel (GOI), as contract, into prototype M109s. DA and MOD supplied their own M109s for prototype work. GOI funding for its share of the program was \$30.7 Propelled Howitzer in November 1985. This program incorporated already developed items, together with items which were developed under million over Fiscal Years (FY) 1986-1990. The U.S. Howitzer is currently in the full scale production phase and has been named the M109A6 represented by the Ministry of Defense (MOD), agreed to cooperate on a joint development project to improve the M109 Series 155mm Selfrate production contract in September 1990. In April 1993, FMC Corporation (now known as United Defense, Limited Partnership, Paladin

		DATE
BUDGET ITEM JUSTIFICATION SHEET	EET	February 1997
APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE	
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	HOWITZER, I	HOWITZER, MED SP FT 155MM M109A6 (MOD) (GA0400)

OSIP No.	Description	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-81-05-1002 unclassified	Howitzer Improvement Program 1.207.4 105.9	ant Program 105.9	12.3	11.5	4.4	0.0	0.0	0.0
1-96-05-1003 unclassified	Chlorofluorocarbon (CFC) Elimination 0.0	(CFC) Elimination 0.0	6.4	0.0	0.0	0.0	0.0	0.0
			!					C
Totals	1,207.4	105.9	18.7	5.11	4.4	0.0	0.0	O:O
			And the state of t					
							·	

MODIFICATION INSTALLATION SUMMARY (TOA, Dollars in Millions)	ALLATION (rs in Millions	SUMMA 3)	Α				Date F	February 1997	1997
	FY 1996								
System/Modification	and Prior	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
No P3a Set for modification HOWITZER, MED SP FT 155MM M109A6 (MOD) GA0400									
Howitzer Improvement Program	53.2	11.4		0.0	0.0	0.0			64.6
Chlorofluorocarbon (CFC) Elimination	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	53.2	11.4	0.0	0.0	0.0	0.0	0.0	0.0	64.6

	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	Howitzer Improvement Program 1-81-05-1002		
MODELS OF SYSTEMS AFFECTED:	Howitzer, Med Sp Ft 155mm M109 Ser (Mod) (MYP).		
DESCRIPTION / JUSTIFICATION:			

The M109A6 Paladin, approved for full scale production, has been designed to upgrade the M109A2/A3 Howitzer's responsiveness, effectiveness, survivability; and Reliability, Availability, and integration and assembly, and acceptance testing. The acquisition strategy for FY89/90-FY92 called for sole source contracts. A FY93-FY96 competitive multiyear production contract was awarded in April 1993. The fiscal program identified herein reflects the economies and efficiencles of a competitive multiyear contract strategy. An FY97 follow-on sole source single year Statement (MENS), approved by the Secretary of Defense in December 1980. The production phase of the program involves a combined effort between Letterkenny Army Depot and the overhauled/modified chassis with the new M284 Cannon and M182 Gun Mount manufactured by Watervillet and Rock Island Arsenais, respectively, are shipped to the contractor for final contractor. M109A2/A3 Howitzers from CONUS and OCONUS field units are being shipped to Letterkenny Army Depot. Letterkenny removes traverse mechanism, disassembles the howitzer, reconditions turret components to be reset in the new turret, and overhauls/ modifies the chassis to the Paladin configuration. The reconditioned turret components, and the Maintainability-Durability (RAM-D). This meets the user's urgent need for a product improved system that satisfies the deficiencies cited in these areas by the Mission Element Need contract for an additional 37 M109A6 Paladin Vehicles is planned for award to UDLP, the current full scale production producer.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES

Pre-ASARC review was chaired by the Assistant Secretary of the Army for Research, Development and Acquisition, and the M109A6 Paladin was approved for Type Classification-Standard and The M109A6 was approved for entry into full scale development in November 1984. At that time, DA decided to modify M109A2/A3 Howitzers to a HIP configuration. It was decided to merge approved for Type Classification-Low Rate Production (TC-LRP) and designated the M109A6 Howitzer following a Milestone III-A ASARC on 7 February 1990. In March 1993 a Milestone III full rate production and deployment. This Milestone III approval is documented in Aquisition Decision Memorandum dated 9 April 1993. The Paladin production program is within schedule the Howitzer Extended Life Program (HELP) into the HIP where kits from both programs would be applied to the M109A2/A3 Howitzer. The improved 155mm Self-Propelled Howitzer was and, as of 1 February 1997, has successfully fielded 359 M109A6 Howitzers and all assoclated Items of equipment.

PLANNED	ACTUAL	
	2QFY86	
	4QFY88	
	1QFY90	
	2QFY90	
	3QFY92	
	1QFY93	
	3QFY93	
	3QFY93	
	1QFY95	
	4QFY95	
	<u> </u>	

					4		i	1011											
MODIFICATION TITLE (Conf):		₹	vitzer I	Howitzer Improvement Program 1-81-05-1002	ment	Prograi	m 1-81	-05-10	, 202						Date:		epru	February 1997	
FINANCIAI PLAN: (\$ in Millions)						,													
	Ā	FY 1996	r																
	au	and Prior	F	FY 1997	FY 1998	966	FY 1999	60	FY 2000	\vdash	FY 2001	L L	FY 2002	FY.	FY 2003	7	H	TOTAL	LAL
H CO	₹	€9	₹	8	ð	\$	à	\$	Α̈́O	Ø ₩	S A	ਰੇ	69	ð	es.	Qfy	es.	ð	\$
PROCUREMENT		149.4	-						<u></u>										149.4
Kit Quantity	877		37										**************************************					914	
Equipment		698.6		49.2		020		α ο								_			i i
Equipment Nonrecurring		235.3		5.2		?		?											733.0
Engineering Change Orders		162.2		20.1				3.3		0.4									186.0
Data		11.4		2.0															13.4
Training Equipment		14.1																	14.1
Vehicular Intercom System		9.5		0.5															9.7
Other		4.4		0.8															5.2
Project Management Admin		9.5		4.7				3.0											16.9
Fielding		9.8		12.0		7.3	•	4.4	-	4.0									37.5
Installation of Hardware	- 					-													
FY 1996 & Prior Kits	716	53.2	161	9.2					-									077	7 63
FY 1997 Eqpt Kits											-						-	37	9.20
FY 1998 Eqpt kits																		5	7
FY 1999 Eqpt kits								····											
FY 2000 Eqpt kits																			
FY 2001 Eqpt kits																			
FY 2002 Eqpt kits											-								
FY 2003 Eqpt kits															_		· · · · ·		
(FY(TC) Eqpt (xx kits)								•	····	•									
Total Installation Cost	716	53.2	198	11.4		+	-	+	+	+							-	2	0.40
Total Procurament Cost		1 207 4		2 10	\mid	500	↓ 			<u> </u>	1	\downarrow			\dagger	+	$\frac{1}{1}$	4	04.0
		1.102,1		103.9		12.3		0.1		4.4	-				1		_		1,341.5
METHOD OF IMPLEMENTATION: Letterkenny Army Depot and System Contractor	: Letter	kenny Arm	iv Depot	and Svst	em Cont	ractor													
Contract Dates:	щ	FY 1997:	Feb 1997	20	Ŀ	FY 1998:			FΥ	FY 1999:									
Delivery Date:	4	FY 1997:	Dec 1998	98	iL.	FY 1998:			<u>F</u>	FY 1999:									



Installation Schedule:		owitze	ır Imp	roven	nent F	Progre	Howitzer Improvement Program 1-81-05-1002	11-05-	1002		1					ם	Date		February 1997	ary 1	266					
	9		<u> </u>	FY 1997)	FY 1998	966			FY 1999	339			FY 2000				FY 2001	. 5						
	& Prior	+-1	Oŧ	(C)	41	₩	QI	ଠା	41	- -1	CNI	ଜା	41	-	01	(C)	41	-	C 1	ର	41				Ħ	Total
Inputs																										
FY 1996 & Prior	555	25	54	24	54	54	25																			877
FY 1997							N	8	17																	37
FY 1998																										
FY 1999																			-							
Total																										914
Outputs																										
FY 1996 & Prior	417	49	24	24	54	54	54	54	54	33																877
FY 1997										7	18	72														37
FY 1998																										
FY 1999																										
Total																										914
			FY2002	α			FY2003	~		ш.	FY2004			Ĺ	FY2005			щ	FY2006			Œ	FY2007			
		_	8	က	4	_	8	က	4	-	8	က	4	-	ત્ય	က	4	-	Ø	ო	4	-	7	ဗ	4 IG	Total
Inputs																										
FY 2000																										
FY 2001																										
FY2004																										
FY2005																										
Outrainte																		٧.								
FY 2000																		-								
FY 2001																										
FY2004																										
FY2005																										
Remarks:																										
																						١	l			Ì

	INDIVIDUAL MODIFICATION		Date February 1997
MODIFICATION TITLE:	Chlorofluorocarbon (CFC) Elimination 1-96-05-1003	03	
MODELS OF SYSTEMS AFFECTED:	M109A6 Paladin Howitzer.		
DESCRIPTION / JUSTIFICATION:			
References: DOD Directive 60 The previous references mand (MCS), with a non-chlorofluoro no later than January 1997.	References: DOD Directive 6050.0; DA Policy Letter 200.90-1; AMC Regulation 70-68; Montreal Protocol of 1986. The previous references mandate the replacement of R-12 Freon, used in the current M109A6 Paladin's Microclimatic Cooling System (MCS), with a non-chlorofluorocarbon (CFC) substitute. This schedule is based on the premise that a freon replacement will be identifed no later than January 1997.	70-68; Montreal Protocol of 1986 rrent M109A6 Paladin's Microclir on the premise that a freon replad	5. natic Cooling System cement will be identifed
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	VELOPMENT MILESTONES:	COOK CONTROL	GENOCOCK
Preliminary Design Review:	.w.	1	משובים שנים שנ
Critical Design Review		1QFY98	
Joint Government Contractor Test and Evaluation	ctor Test and Evaluation	2QFY98	
IPR Production Decision		2QFY98	
TDP Available		2QFY98	

				NDI	INDIVIDUAL MODIFICATION	ODIFIC	ATION						Date		February 1997	v 1997	
MODIFICATION TITLE (Cont):	O	Chlorofluorocar	Iorocal	pon (C	FC) EI	iminat	ion 1-9	bon (CFC) Elimination 1-96-05-1003	ဗွ								
FINANCIAL PLAN: (\$ in Millions)	FY 1996																
	d Pri	FY 1997	397	FY 1998	F	FY 1999	H	FY 2000	FY	FY 2001	FY 2002	\vdash	FY 2003	75		TOTAL	AL
	Chy \$	ð	€	Δŧσ	σ \$	ξ	₹ \$	\$	ਰੇ	69	\$ Ap	ğ	\$	ð	€	δę	\$
RDT&E PROCUREMENT		erre Allen Marie					i-										
Retroff Oh				190				-						107		2	
Hardware				3	5.9			·						48,	40.6	9.4	46.5
Testing					0.5												0.5
					·												
	•								***							٠	
							 -				<u>.</u>						

Installation of Hardware																	
FY 1996 &Prior EqptKits																	
FY 1997 EqptKits			_														
FY 1998 EqptKits												_					
FY 1999 EqptKits														300	0.8	300	0.8
FY 2000 EqptKits						<u>-</u>								300	0.8	300	0.8
FY 2001 EqptKits	.,													314	0.8	314	0.8
FY 2002 EqptKits																	
FY 2003 EqptKits																	
TC EqptKits						-											
Total Installation Cost						-								914	2.4	914	2.4
Total Procurement Cost				-	6.4	-	-					_			43.0		49.4
METHOD OF IMPLEMENTATION: Enter Method	: Enter Method		₹	ADMINISTRATIVE LEADTIME:	RATIVE	LEADI	E E	ω	Months		PRODUCTION LEADTIME:	ONLEA	DTIME	ĸ	Months		
Contract Dates:	FY 1997:	٠.			Σi	1998:	Contract	FY 1998: Contract Mod -May 1998	1998		FY 1999:						
Delivery Date:	FY 1997:				FY	FY 1998:		ŏ	Oct 1998		FY 1999:						•



Remarks:

FY 1999



	BUC	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	EET		DATE	Fehruary 1997	:
APPROPRIATION / BUDGET ACTIVITY	YTIVI			P-1 ITEM NOMENCLATURE	ш			
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	OF WPNS & TRKD C Vehicles	O CMBT VEHS /Tra	acked Combat		_	FAASV PIP TO F	FAASV PIP TO FLEET (GA8010)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	6.4	13.8	1.9	0.4	0.1	0.0	0.0	0.0

DESCRIPTION: Funds the procurement of approved modifications to the M992 Field Artillery Support Vehicle (See detailed Description/Justification on the following exhibit P-3A).

DATE	February 1997			FAASV PIP TO FLEET (GA8010)
	BUDGET ITEM JUSTIFICATION SHEET	APPROPRIATION / BUDGET ACTIVITY	PHOCOHEMENT OF WPNS & THKD CMBT VEHS /Tracked Combat	Vehicles

MODIFICATION INSTALLATION SUMMARY	INSTALLAT	ION SUM	MARY				Date Fe	February 1997	26
•			(TOA, D	(TOA, Dollars in Millions)	(suoilli	•			
	ă	<u>.</u>	L						
System/Modification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
No P3a Set for modification FAASV PIP TO FLEET GA8010				* ************************************					
FAASV MATERIEL CHANGE (A2 Conversion)	15.4	2.6	0.0	0.0	0.0	0.0	0.0	0.0	18.0
ASV HALON REPLACEMENT	0.0		0.0	0.3	0.0	0.0	0.0	0.0	0.3
Totals	15.4	2.6	0.0	0.3	0.0	0.0	0.0	0.0	18.3

	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	FAASV MATERIEL CHANGE (A2 Conversion) 1-93-05-4457		
MODELS OF SYSTEMS AFFECTED:	FAASV M992A2		
DESCRIPTION / JUSTIFICATION:			
The FAASV materiel change end Changes. The materiel change These Improvements include the	The FAASV materiel change encompasses the previously approved FAASV HELP (Howitzer Extended Life Program) and Survivability Materiel Changes. The materiel change incorporates M109 Family of Vehicles improvements into the FAASV in order to maintain a common chasis. These Improvements include the Low Heat Rejection/Cold Start Engine improved YTG 411.4 Transmission Bolishilty, and Mainstin Low Heat Rejection/Cold Start Engine improved YTG 411.4 Transmission Bolishilty, and Mainstin Cold Start Engine improved YTG 411.4 Transmission Bolishilty and Mainstin Cold Start Engine improved YTG 411.4 Transmission Bolishilty and Mainstin Cold Start Engine improved YTG 411.4 Transmission Bolishilty and Mainstin Cold Start Engine improved YTG 411.4 Transmission Bolishilty and Mainstin Cold Start Engine improved YTG 411.4 Transmission Bolishilty and Mainstin Cold Start Engine improved YTG 411.4 Transmission Bolishilty and Mainstin Cold Start Engine improved YTG 411.4 Transmission Bolishilty and Mainstin Cold Start Engine improved YTG 411.4 Transmission Bolishilty and Mainstin Cold Start Engine improved YTG 411.4 Transmission Bolishilty and Mainstin Cold Mainstin Cold Start Engine improved YTG 411.4 Transmission Bolishilty and Mainstin Cold Mains	ogram) and Su ogram) and Su ogramity, and A	rvivability Materiel ommon chasis.

(i.e spares, repair parts, special tools, training) and the FAASV cold starting and RAM features will be comparable. The modifications to the rear modifications to provide interoperability with the M109A6 Paladin Howitzer. The enhancements provided by the materiel change will permit the FAASV crew to operate in the same environment as the M109A6 Paladin. This means the operation and maintenance features will be common ejection/Cold Start Engine, improved X1G 411-4 Transmission, Reliability, and Maintainability (RAM) improvements to the cooling, electrical, and suspension systems, relocated heater and hydraulic reservoir, stronger fuel cell, and door convevor and propellant racks will improve M109A6 supportability.

DI ANNED	1QFY91	4QFY91	2QFY93	3QFY93	3QFY93	3QFY94	1QFY95
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Examples	Preliminary Design Review:	Critical Design Review:	Contractor Test and Evaluation:	IPR Production Decision	TDP Available:	M992A2 First Delivery	M992A First Unit Equipped

					N	IVIDUA	L MODII	INDIVIDUAL MODIFICATION	Z						٥	Date	ш	ebrua	February 1997	
MODIFICATION TITLE (Cont):		H.	FAASV MATE	MAT	RIEL	CHAN	GE (RIEL CHANGE (A2 Conversion) 1-93-05-4457	nversi	on) 1-{	33-05-	4457				,				
FINANCIAL PLAN: (\$ in Millions)	EV 1006	900																		
	and Prior	rlor	FY 1997	1997	FΥ	FY 1998	FY 1999	666	FY 2000	00	FY 2001	01	FY 2002	\vdash	FY 2003	03	TC		TOTAL	AL.
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HDI &E PROCUREMENT																	· · · · · · · · · · · · · · · · · · ·			
Kit Quantity	664																	,	664	
Installation Kits		45.4																	_	42.4
Engineering Change Orders		10.2		0.1												-		1.5		11.8
Project Management Admin.		1.0		0.4									****, ,					0.3	1	1.7
Testing		0																		0.1
Vehicular Intercom System		1	-	9.1				7										,		- 6. I
Fielding		3.5		9.0		0.		0.1		. .								د .		5.8
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Installation of Hardware	,																•			
FY 1996 & Prior Eqpt Kits	462	15.4	79	2.6								•					123	2.0	664	23.0
FY 1997 Eqpt Kits													-							
FY 1998 Eqpt Kits																				
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FY 2003 Eqpt kits																				
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Total Installation Cost	402	15,4	2	Z.D				1		1	+	1		1	1		3	2.0	004	23.0
Total Procurement Cost		72.6		12.8		9.7		10-1	\dashv	-1		\exists		\dashv		1		8.1		93.9
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METHOD OF IMPLEMENTATION: Letterkering Affility Debot & Contract Dates: FY 1997: Jan Date: EV 1997: Jan	Y: Leilerk	FY 1997: EV 1997: EV 1997:		Jan 97		5	IVE LEAU FY 1998: EV 1998:	֓֞֝֞֝֞֝֞֝֞֝֓֓֓֓֓֓֓֓֓֓֞֝֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓		†		- 4- 11	FY 1999: FY 1999:			ii S	2 D			
Delivery Date.		66											1 220.			l				

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		704	MAIL		È.	NGE	AZ AZ	Conk	rsion,	LAASV WATERIEL CHANGE (AZ Conversion) 1-93-05-4457	-05-4	457				Õ	Date	-	February 1997	iry 199	97				
	FY 1996		FY 1997	266			FY 1998	866			FY 1999	66			FY 2000	ō			FY 2001	_					
	& Prior		~1	mi	41	-	CII	നു	41	ᆏ	~1	(C)	41	-	N.	6	4	-	8		4				F Story
Inputs																	i	1			4				1010
FY 1996 & Prior	356	35	35	35	4	38	=																		i
FY 1997																									541
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Item No. 10 ge 6 of 9

	INDIVIDUAL MODIFICATION		Date Fe	February 1997
MODIFICATION TITLE:	FAASV HALON REPLACEMENT 1-94-05-4477			
MODELS OF SYSTEMS AFFECTED:	FAASV M992A2.			
DESCRIPTION / JUSTIFICATION:				
References: DOD Directive 6050.0; DA F The previous references mandate the rel based on the premise that a replacemen replaced with an alternate agent system.	References: DOD Directive 6050.0; DA Policy Letter 200.90-1; AMC Regulation 70-68; Montreal Protocol of 1986. The previous references mandate the replacement of Halon charged fire suppression systems to prevent ozone depletion. This schedule is based on the premise that a replacement chemical will be identified no later than 1QFY 97. The Halon charged fire suppression system will be replaced with an alternate agent system.	-68; Montreal Protocol of 196 on systems to prevent ozone 2FY 97. The Halon charged f	96. depletion. This so ire suppression sy	chedule is stem will be
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES	VELOPMENT MILESTONES:		ACCOMPLISHED	
Examples Preliminary Design Review:		1		
Critical Design Review:	,	4QFY97		
Joint Government Contractor Test and Evaluation		2QFY98		
IPR Production Decision		2QFY98		
TDP Available:		2QFY98		

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						7001		2	2							Date		-eprua	February 1997	
MODIFICATION TITLE (Cont):		12	MSV	HALO	N REF	LACE	MEN	FAASV HALON REPLACEMENT 1-94-05-4477	-05-4	477										
FINANCIAL PLAN: (\$ in Millions)	FY 1996	96								:										
	and Prior	rior	FY 1997	795	FY 1998	198	FY 1999	66	FY 2000	90	FY 2001	100	FY 2002	202	FY 2003	603	1		TOTAL	I
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HUI KE PROCUREMENT Kit Quantity Installation Kits Engineering Support Data	7			0.5	36	0.0 6.0 8.0					/						849	6.1	882	6.4
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Installation of Hardware FY 1996 & Prior Eqpt Kits FY 1997 Eqpt Kits FY 1999 Eqpt Kits FY 2000 Eqpt Kits FY 2001 Eqpt Kits FY 2003 Eqpt Kits FY 2003 Eqpt Kits FY 2003 Eqpt Kits							e S	0.3									430	8. 8. 9. 2.	36 419 430	0.3 3.6 3.2
Total Installation Cost	1	+	1	+	+	+	98	0.3	-	-		\dashv					849	6.8	885	7.1
lotal Procurement Cost	\dashv	0.3	-	9	\dashv	1.8	\dashv	0.3	-			\dashv						13.3		16.7
METHOD OF IMPLEMENTATION: Contractor Contract Dates: Delivery Date:	Contracto FY FY	ctor FY 1997: FY 1997:		<	ADMINISTRATIVE LEADTIME: FY 1998: FY 1998:	rrativ Fy Fy	IVE LEAD FY 1998: FY 1998:	TIME:	F.	5 Mc FEB 98 AUG 98	Months	בנננ	PRODUCTION LEADTIME: FY 1999: FY 1999:	TION L	EADTIN	<u>ü</u>	9 9	Months		



Exhibit P-3a Individual Modification

Installation Schedule:	FAASV HALON REPLACEMENT 1-94-05-4477	EMENT 1-94-0	5-4477					Date	W	February 1997	1997			
FY 1996	96 FY 1997	FY 1998		FY 1999		ш	FY 2000		L	FY 2001				
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FY 1997														
FY 1998		∢	36											36
FY 1999														
Outputs														
FY 1996 & Prior														
FY 1997														
FY 1998			36											36
FY 1999														
	FY 2000	FY 2001		FY 2002		Ε¥	FY 2003		Ā	FY 2004		FY 2005	വ	
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Inputs														
FY 2000														
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Y 2002														
FY 2003														
Outputs														
FY 2000														
FY 2001														
FY 2002														
FY 2003														
Remarks:														

						DATE		
	BUE	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	IVITY			P-1 ITEM NOMENCLATURE	E			
РРОСИВЕМЕН	PROCUREMENT OF WPNS & THKD CMBT VEHS /Tracked Combat Vehicles	3T VEHS /Tracked Combat	Vehicles		IMPRO	IMPROVED RECOVERY VEHICLE (M88 MOD) (GA0570)	HICLE (M88 MOD) (3A0570)
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	24	24	12	17	25	31	36	45
COST (in millions)	54.4	55.7	28.6	40.2	59.7	74.0	87.1	109.8

against small arms fire, artillery fragments and anti-personnel mines. The vehicle mounts a .50 caliber machine gun for self-protection. The M88A2 and a spade. The boom has a 35 ton lift capacity and the main winch has a constant pull capacity of 70 tons. The hull is armored for protection Description: The M88A2 Hercules is an armored, full-tracked, diesel-powered, recovery vehicle configured with an A-frame boom, two winches, HERCULES is capable of performing recovery, evacuation, and limited repair of the main battle tank.

ack of recovery capability has necessitated the development of an improved recovery vehicle to provide a towing capability for vehicles weighing up to JUSTIFICATION: The present 56 ton M88A1 is deficient in its ability to safely perform battlefield recovery of vehicles weighing 60 tons or more. The M88A1 cannot safely recover the Army's current main battle tank, the Abrams Tank, without using a second vehicle as a brake vehicle. The present M88 recovery vehicle chassis, upgrade the propulsion system to 1050 HP, add armor protection, improve winching to 70 tons, improve hoisting to 70 tons. The M88A2 HERCULES will provide the Army with this capability. The M88A2 HERCULES program strategy is to modify the existing 35 tons, and add a hydraulic assisted braking system.

Cost Analysis Exhibit (P-5)		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TR	T ACTIVITY NT OF WE	TITLE/NO INS & TRKD C	ROCUREMENT OF WPNS & TRKD CMBT VEHICLE	B. WEAPON IMPROVEI	ED RECOVERY	B. WEAPON IMPROVED RECOVERY VEHICLE (M88 MOD)	<u> </u>	C. MANUFACTURER NAME United Defense LP York PA	ΡA	o. date Febr	ате February 1997
	₽		FY 96	FY 96		FY97	12/4/3/0	(A)C	FY98			FY99	
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2. Vehicle Manufacturing - GFE		1980	24	83	2040	24	85	1038	12	87	1496	17	88
3. Contract Engineering		1779			2016			2092			2239		
4. Engineering Change Orders		113			460			228		•	308		
5. Project Management Admin - Core		897			961			991			1010		
6. Project Management Admin - OGA		1149			1099			839			859		
7. Transportation		48			48			24	<u> </u>	•	33		
8. Fielding		871			632			628	-		899		
9. Testing		1685			506								
10. Test Vehicle Refurb					2493								
TOTAL		54363			55687			28601			40229		
Weapon System Unit Cost		2265			2320		· · · · · · · · · · · · · · · · · · ·	2383		-	2366		

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Exhibit P-5A P

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CODE "B" ITEM D	DESCRIPTION	DATE		REPORT CONTROL SYMBOL
Appropries		Februa	February 1997	DO-COMP(AR)1092
NOTATE	ACTIVITY	P-1 ITEM NOMENCLATURE	CLATURE	
PROCUREMENT OF WPNS & TRKD CMBT VEHS	ACTIVITY 1, TRKD COMBAT VEH		IMPROVED RE	IMPROVED RECOVERY VEH (M88 MOD) (GA0570)
1. CURRENT DEVELOPMENT AND TEST STATUS				
				SCHEDULE DATE
		CURRENT	LAST RPTD	REASON FOR DELAY*
		(1)	(2)	(3)
Pre-Production Qual Test (PPQT)	ACTUAL	Aug-93	Aug-93	N/A
Limited User Test (ILUT)	ACTUAL	Jul-93	Jul-93	N/A
Production Qualification Test (PQT)	ACTUAL	Feb-96	Feb-96	٧×
Initial Operation Test & Evaluation (IOT&E)	ACTUAL	96-Inf	Jun-96	Test Hardware Delivery Delayed
2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE	TC Standard 2Q97			
3. EQUIPMENT ITEM(S) TO BE REPLACED				

M88A2 Improved Recovery Vehicle replaces the M88A1 Recovery Vehicle

. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT TO BE REPLACED

- I. Increased safe tow weight from 56 to 70 tons. 2. Improved propulsion system from 750 HP to 1050 HP Engine. 3. Improved transmission to handle the IRV's increase towing capability.
 - . Added hydraulic assisted braking system. 5. Improved armor protection. 6. Main winch has 70 ton constant pull capacity. 7. Added 3 ton auxillary winch. 8. Upgraded holet to 35 tons.

5. DEVELOPMENT CONTRACT INFORMATION	ORMATION				,		
CONTRACTOR NAME	PLANT LOCATION	COMPONENT	THROUGH 1996	1997	1998	1999	BEYOND BYS
(1)	(2)	(6)	4)	(2)	(9)	2	6
United Defense, LP	York, PA	PROTOTYPE	41,5	3.0	,		(2)
Government Support			9.3				
IOTAL RDT&E FUNDING			50.8	3.0			

6. REMARKS

Results of PQT and IOTE indicate that the vehicle is performing favorably. The Reliability, Availability, and Maintainability (RAM) objective for the system is 210 Mean Miles Batween Operational Mission Failures (MMBOMF); the system demonstrated 256 MMBOMF in testing. The system Mean Miles Between Hardware Failure goal is 375 miles; the system demonstrated 392 miles in testing.

^{*} Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date.

						DATE		
	BUC	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	YTIVI			P-1 ITEM NOMENCLATURE	щ			
PROCUREMENT OF	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked (BT VEHS /Tracked C	Combat Vehicles			BREACHER SYSTEM (MOD) (GZ3200)	:M (MOD) (GZ3200)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	11	F	16
COST (in millions)	0.0	0.0	0.0	10.4	11.0	83.4	86.3	125.9

minefields and removing complex natural and man-made obstacles at the forward edge of the battlefield. The Grizzly will be capable of moving with, mine clearing blade with automatic depth control, a power driven excavating arm to reduce complex obstacles, and an armored commander's control station. The Grizzly will provide the Combat Engineer with significantly improved mission effectiveness and crew/vehicle survivability while clearing DESCRIPTION: The Grizzly (Breacher) will be developed around the M-1 Abrams tank chassis and will integrate a versatile/survivable full-width and be as survivable as, the force it is supporting. It will provide the maneuver force with the freedom required to successfully execute assigned ground combat mission requirements.

agility of the current maneuver force. The Grizzly possesses a complex obstacle reducing capability, with mobility protection, and agility comparable complex linear obstacle breach. All existing counterobstacle and countermine systems are single purpose only, and lack the mobility, protection and JUSTIFICATION: During Operation Desert Storm, it became evident that the Army presently has no one vehicle capable of performing an in-stride, to the M-1 Abrams Tank.

BUDGET PROCUREMENT HIST
PROCUREMENT OF WPNS & TRKD CMBT VEHS / Tracked Combat Vehicles
CONTRACTOR AND LOCATION
UDLP: York, PA*

CODE "B" ITEM DE	DESCRIPTION	DATE		REPORT CONTROL SYMBOL
		Februa	February 1997	DD-COMP(AR)1092
APPROPRIATION	ACTIVITY	P-1 ITEM NOMENCLATURE	CLATURE	
PROCUREMENT OF WPNS & TRKD CMBT VEHS	Tracked Combat Vehicles		BREACHER	BREACHER SYSTEM (MOD) (GZ3200)
1. CURRENT DEVELOPMENT AND TEST STATUS				
				SCHEDULE DATE
		CURRENT	LAST RPTD	REASON FOR DELAY.
		(1)	(2)	(3)
a. DEV TEST & EVAL (DT&E)	PLAN / ACTUAL	1096	1096	
b. INITIAL OPER TEST & EVAL (IOT&E)	PLAN / ACTUAL	2096	2096	
c. OPER TEST & EVAL (OT&E)	PLAN / ACTUAL	4002	2002	Delayed MS II /extended EMD design to mitigate risk.
d. AVAIL DATE OF TECH DATA PKG (TDP)		3099	2099	Extended EMD design time to mitigate technical risk.
OR PERFORMANCE SPECIFICATIONS				
2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE	TCLP-DEC 99 TC STANDARD-ILIN 02			

. EQUIPMENT ITEM(S) TO BE REPLACED

NA All existing counterobstacle and countermine systems are single purpose only.

4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT TO BE REPLACED

The Grizzly (Breacher) supports the Army requirement for a mine clearing capability comparable in mobility, protection, and agility to the maneuver force. The Grizzly integrates countermine and counterobstacle capabilities into a single, survivable system capable of breaching complex obstacles in-stride and creating a cleared lane for other combat vehicles to follow.

5. DEVELOPMENT CONTRACT INFORMATION	ORMATION						
CONTRACTOR NAME	PLANT LOCATION	COMPONENT	THROUGH 1996	1997	1998	1999	BEYOND BYS
(1)	(2)	(3)	4	(2)	(9)	(2)	9
UDLP •	York, PA	Advance Development	61.4				
UDLP •	York, PA	Eng & Míg Dev Prototype	5.8	29.5	38.8	39.1	92.5
Government Support		Advanced Development	11.1				
Government Support		Eng & Mfg Development	0.7	4.6	4.9	12.3	24.7
TOTAL RDT&E FUNDING			79.0	34.1	43.7	51.4	117.2

*United Defense Limited Partnership

* Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date.



						DATE		-
	BUD	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	ТІЛІТУ			P-1 ITEM NOMENCLATURE	111			
PROCUREME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	T VEHS /Tracked Combat \	Vehicles			HEAVY ASSAULT BRIDGE	HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	2	10	7	6	13	15	17	17
COST (in millions)	14.6	51.3	42.2	52.0	71.2	90.1	111.5	122.5

Abrams Tank chassis. The bridge is capable of spanning gaps up to 24 meters on both prepared and unprepared abutments and can be placed on a The Wolverine is operated by a crew of two soldiers and will be employed by Combat Engineer units in both offensive and defensive combined arms bearing surface over its entire length. It is launched under armor within five minutes and can be retrieved, from either end, in less than ten minutes. DESCRIPTION: The Wolverine (Heavy Assault Bridge) is a 26 meter (79 feet) Military Load Class 70 bridge transported on a modified M1A2 SEP operations. Its mission is to provide gap crossing capability for heavy maneuver forces. It is planned to support the Abrams Tank System and the Bradley Fighting Vehicle and is compatible with these systems in mobility and survivability.

logistics compatibility. The Wolverine enhances the Combined Arms Team's ability to move where it wants, multiplying its combat capabilities. First JUSTIFICATION: During Operation Desert Storm, it became evident that the current Army bridging system was deficient in gap spanning capability worldwide gap crossing capabilities, increased load capacity to support Military Load Class 70 vehicles and improved mobility, survivability, and and required increased load carrying capability. The Wolverine will replace the Armored Vehicle Launched Bridge (AVLB) providing increased Unit Equipped will be in FY00 at a quantity of 12 vehicles. D. DATE February 1997

C. MANUFACTURER NAME GEN DYNAMICS LAND SYS

B. WEAPON HEAVY ASSAULT BRIDGE (HAB) SYS (MOD)

A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 /

WTCV Cost Analysis

WTCV Cost Elements

В

. Vehicle Manufacturing - Contractors

2. Vehicle Manufacturing - ANAD

3. Vehicle Manufacturing - GFE

5. Engineering Change Orders

4. Contract Engineering

7. Project Mgmt Admin - OGA 6. Project Mgmt Admin - Core

9. Initial Production Facilities 8. Total Package Fielding

TOTAL PROGRAM COST

Weapon System Unit Cost

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Exhibit P-5A Procurement History and Planning	2
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		C. P-1 ITEM NOMENCLATURE	EAVY ASSAUI	QTY Each		0 0 0	4 4	999	7 7	o o o	
		C. P-1 ITEM	I	DATE OF FIRST DELIVERY		Mar-99	Apr-99	Oct-00	Feb-00	Sep-00	
				AWARD DATE		Aug-96	Dec-96	Jun-97	Dec-97	Nov-98	
	FORY AND PLANNING EXHIBIT (P-5A)			CONTRACTED BY		TACOM	TACOM	TACOM	TACOM	TACOM	
	PLANNIN		bat Vehicles	CONTRACT METHOD AND TYPE		SS-CPFF	SS-CPFF OPTION	SS-FFP BOA	SS-FFP BOA	SS-FFP BOA	
	BUDGET PROCUREMENT HISTORY AND		& TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	CONTRACTOR AND LOCATION		General Dynamics Land Sys * Anniston Amy Depot Government Furnish Equipment	General Dynamics Land Sys * Anniston Army Depot	General Dynamics Land Sys* Anniston Army Depot Government Furnish Equipment	General Dynamics Land Sys * Anniston Army Depot Government Furnish Equipment	General Dynamics Land Sys * Anniston Army Depot Government Furnish Equipment	ems - Sterling Heights, MI
	BUDGET PRO	B. APPROPRIATION / BUDGET ACTIVITY	PROCUREMENT OF WPNS & TRKD CMBT VEHS / '	LINE ITEM / FISCAL YEAR	1. Vehicle Manufacturing						* General Dynamics Land Systems - Sterling Heights, MI
		B. APPROPRI			1. Vehicle	FY 96 FY 96 FY 96	FY 97 FY 97	FY 97 FY 97 FY 97	FY 98 FY 98 FY 98	FY 99 FY 99 FY 99	REMARKS:

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HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)

-1 ITEM NOMENCLATURE

Fiscal Year 98

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LIMA, OH	1					$\overline{}$	<u> </u>	REORDER	_				+			L					Τ							
*HAB vehicles will be produced on the same production							Ξ	INITIAL					H			Ц		П			П							
line as the M1A2 SEP vehicles.				-		+	2	REORDE	_			١	╁						l		Т							
	$\frac{1}{1}$			+	<u> </u>	T	ĪĒ	REORDER	<u>~</u>				H			Ц		П			П							
							Ξ]	INITIAL					H		ŀ	Ц		П			П							
	\dashv	1		4	┨	4	프	REORDER	<u>_</u>				┨			_	١	1	1	۱	┨	1		۱		١	ı	7

cription

		DATE		REPORT CONTROL SYMBOL
CODE "B" II EM DE	DESCRIPTION	February 1997	y 1997	DD-COMP(AR)1092
APPROPRIATION	ACTIVITY	P-1 ITEM NOMENCLATURE	LATURE	
PROCUREMENT OF WPNS & TRKD CMBT VEHS	Tracked Combat Vehicles	τ	IEAVY ASSAULT	HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)
1. CURRENT DEVELOPMENT AND TEST STATUS				
				SCHEDULE DATE
		CURRENT	LAST RPTD	REASON FOR DELAY*
		(1)	(S)	(3)
a. DEV TEST & EVAL (DT&E)	PLAN / ACTUAL	DEC91/DEC 92	Dec-92	DELAY IN FUNDING
b. PRE-PROD QUAL TEST (PPQT)	PLAN / ACTUAL	JUN 96/AUG 96	96-8nV	EXTENDED CONTRACTOR TEST
c. LOGISTICS DEMONSTRATION	PLAN / ACTUAL	36 NUL/36 NUL	36-unf	
d. PRODUCTION VERIFICATION TEST (PVT)	PLAN / ACTUAL	Apr-99	Aug-98	MIGRATION TO MIAZ SEP CONFIGURATION
9. INITIAL OPER TEST & EVAL (IOT&E)	PLAN / ACTUAL	Aug-99	Jan-99	MIGRATION TO M1A2 SEP CONFIGURATION
2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE	TCLP - 2Q97, TC STANDARD - 4QFY00			
3. EQUIPMENT ITEM(S) TO BE REPLACED				

Armored Vehicle Launched Bridge (AVLB).

4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT TO BE REPLACED

Military Load Class Improved from MLC 60 to MLC 70. Gap spanning capability improved from 17.4m(57) to 24m(79). Provide mobility and protection comparable to the M1 Abrams Tanks.

5. DEVELOPMENT CONTRACT INFORMATION	PORMATION					
CONTRACTOR NAME	PLANI LOCATION	COMPONENT	THROUGH 1996	1997	1998	
(£)	(2)	(3)	(4)	(2)	(9)	
Southwest Mobile Systems	St. Louis, MO	Eng & Mfg Dev Prototype	5.8			
Other Various Contracts	Various	Eng & Mig Dev Prototype	6.0			1
Gen Dynamics Land Systems	Sterling Height, MI	Eng & Mfg Dev Prototype	36.9	12.6	4.7	ŀ
Government Support		Eng & Míg Dev	10.1		7.3	ł
						ł

BEYOND BYS (8)

1999 (7) 0.2

6.1

0.2

10.2

12.0

12.6

53.7

TOTAL RDT&E FUNDING

6. REMARKS

Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date.



								•
						DATE		
	BUE	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	TIVITY			P-1 ITEM NOMENCLATURE	Œ			
PROCUREME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	3T VEHS /Tracked Combat	Vehicles			M1 ABRAMS TANK (MOD) (GA0700)	K (MOD) (GA0700)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	50.1	63.2	29.8	30.1	23.9	8.89	107.1	129.8

Air System (PJAS); Vehicle Intercommunications System (VIS): External Auxiliary Power Unit (EAPU) and the Mounted Water Ration Heater have been so combined during the life of this program. Finally, there is the Presidentially directed Halon Replacement Program (Ozone The funds programmed in this budget line will provide for the procurement and application of modification kits for the Embedded Battle Command (EBC). Tank operational improvements include the Precision Lightweight GPS Receiver (PLGR); Pulse - Jet Loader's Hatch Ballistic Rims, Turret Cable Ballistic Protection and Driver's / Loader's Hatch Latch); Live Fire Category B (Ammo Door Latch Mechanism, Smoke Generator Fuel Line and Improved Gunner's Station); Battlefield Override (BF/OR); Driver's Viewer Quick concurrent application. Including the Live Fire Mods listed above which will be combined as Block G; more than 60 modifications These P-Forms reflect the alignment of some Mods into Blocks with the expectation that reduced costs will result from Enhancement Initiative (AEI). Tank survivability and safety improvements include Live Fire Category A (Manual Blaster, Driver's / Release (DVQR); System Package (SEP) / 2nd Generation Forward Looking Infra - Red (Gen II FLIR): Driver's Hatch Interlock and Abrams series tank to improve lethality, survivability, safety and operations. Tank lethality will be improved by the Armament Depleting Chemical Replacement). DESCRIPTION: (MWRH).

		DATE
BUDGET ITEM JUSTIFICATION SHEET	EET	February 1997
APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE	
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles		M1 ABRAMS TANK (MOD) (GA0700)

OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-92-05-4411	Halon Replacement							
Environmental	7.4	7.5	4.1	6.8	7.3	7.2	7.5	9.9
TBD1	Drivers Hatch Interlock							
Safety	0.0	16.0	9.9	6.0	0.0	0.0	0.0	0.0
1-92-05-4412	Vehicle Intercommunications System (VIS)	nications System (
Legislative Compl	56.6	6.6	6.0	5.4	9.0	0.0	0.0	0.0
1-89-05-4226	Armament Enhancement Initiativ	ment Initiative (AEI)	(1:					
Operational	60.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
1-92-05-4417	Precision Lightweight GPS Receiver (PLGR)	ht GPS Receiver (F	PLGR)					
Manprint	6.7	1.2	1.6	1.6	1.6	0.4	0.0	0.0
1-89-05-4230	Live Fire Category A (LFCA)	A (LFCA)						
Deficiency Correct	14.4	5.8	3.7	3.7	4.0	3.9	4.1	1.8
1-89-05-4229	Battlefield Override (BF/OR)	(BF/OR)						
Operational	8.9	4.2	2.6	2.5	1.8	0.8	0.8	0.4
1-94-05-4481	Live Fire Category B (LFCB)	3 (LFCB)						W
Deficiency Correct	2.4	1.7	0.8	0.8	0.8	0.8	0.8	9.0
1-92-05-4427	Driver's Viewer Quick Release (DVQR)	k Release (DVQR)						
Safety	0.3	0.2	0.3	0.3	0.2	0.0	0.0	0.0
1-92-05-4475	Pulse Jet Air System (PJAS)	n (PJAS)						
Operational	18.2	9.5	1.8	3.0	3.6	6.3	6.9	7.0
1-92-05-4426	Mounted Water Ration Heater (MWRH)	on Heater (MWRH	(1					
Manprint	1.9	0.2	0.2	0.0	0.0	0.0	0.0	0.0
N/A	Prior Year MOD Kit Applications	Applications						
Operational	65.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
1-96-05-4504	2nd Gen Forward Looking Infra-Red (2GFLIR)	oking Infra-Red (2	GFLIR)					
Operational	0.0	0:0	0.0	0.0	1.8	28.7	50.1	64.7
1-96-05-4505	System Enhancement Package	nt Package (SEP)						
Operational	0.0	0.0	0.0	0.0	1.2	19.7	35.8	47.6
1-96-05-4516	Embedded Battle Command	ommand						
Operational	0.0	0.0	0.0	0.0	1.0	1.0	1.1	- -





		Τ	0.0	0.0	129.8							
	:				12							
76			0.0	0:0	107.1							
February 1997	(GA0700)							,				
	M1 ABBAMS TANK (MOD) (GA0200)		0.0	0.0	68.8							
DATE	M A											
			0.0	0.0	23.9							
	TURE		0.0	0.0	1.							
	P-1 ITEM NOMENCLATURE		O	0	30.1							
BUDGET ITEM JUSTIFICATION SHEET	P-1 ITE		2.1	lde 0.0	29.8							
FICATIO	nicles	į (S	,	External Auxiliary Power Unit (EAPU) Upgrade 0.0								
M JUSTI	ed Combat Vel	External Auxiliary Power Unit (EAPU)	11.0	Unit (EAF 2.5	63.2							
GET ITE	BT VEHS /Trac	rv Power		ry Power								
BUE	S & TRKD CM	al Auxilia	0.0	al Auxilia 0.0	211.9							
	/ BUDGET ACTIVITY PROCLIPEMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	Extern		Extern	,						-	
	ON / BUDGET A	057	ıal	la l								
	APPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF	1-85-05-4057	Operational	TBD2 Operational	Totals							

System/Modification No P3a Set for modification M1 ABRAMS TANK (MOD) GA0700								February 1997	71
			(TOA, D	ollars in	(TOA, Dollars in Millions)	_			
	à						į		
	FY 1996	FY 1997	EY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
M1 ABRAMS TANK (MOD) GA0700									
GA0700			- -						
Holos Bonloomon								-	
Taion neplacement	0.0	0.0	0.0	2.7	2.9	2.9	30	3.0	14 5
Drivers Hatch Interlock	0.0	0.0	9.9	0.9	0.0	0.0		0	12.6
Vehicle Intercommunications System (VIS)	1.	0.8	9.0	9.0	9.0	0.0	0.0	00	3.7
Armament Enhancement Initiative (AEI)	15.3	0.4	0.0	0.0	0.0	0.0		0.0	15.7
Precision Lightweight GPS Receiver (PLGR)	1.7	0.0	0.4	0.4	0.4	0.4	0.0	0.0	3.3
Live Fire Category A (LFCA)	5.5	4.6	2.5	2.5	2.7	2.6	2.7	1.8	24.9
Battlefield Override (BF/OR)	1.0	3.3	1.7	1.6	1.2	0.3	0.4	0.4	9.6
Live Fire Category B (LFCB)	1.6	1.5	9.0	9.0	0.7	0.7	0.7	9.0	7.0
Driver's Viewer Quick Release (DVQR)	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.8
Pulse Jet Air System (PJAS)	0.0	2.3	9.0	0.2	9.0	9.0	1:1	- 64	6.8
Mounted Water Ration Heater (MWRH)	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.4
Prior Year MOD Kit Applications	65.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	67.4
2nd Gen Forward Looking Infra-Red (2GFLIR)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
System Enhancement Package (SEP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Embedded Battle Command	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
External Auxiliary Power Unit (EAPU)	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	2.1
External Auxiliary Power Unit (EAPU) Upgrade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	91.3	15.6	15.7	14.8	9.3	7.5	7.9	7.0	169.1
		· <u>····</u>			· · ·				
		•							

	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	Halon Replacement 1-92-05-4411		
MODELS OF SYSTEMS AFFECTED:	M1 = 0, IPM1 = 818, M1A1 = 4351 and M1A2 = 1079	TOTAL RQMT = 6248	

DESCRIPTION / JUSTIFICATION:

involves the substitution of an, as yet, undetermined chemical for the halon currently used. This requirement was mandated by the 1988 Montreal Protocol in which 93 countries including the U.S.A. agreed to phase out Ozone Depleting Chemicals [ODC's] including survivability concerns but engine compartment halon must be deleted]. See 1992 DOD directive 6050.9 which establishes policy of the halon 1301 used in the Abrams Tank engine compartment [halon 1301 remains authorized for the crew compartment due to ODC's and DA letter 200 / 9 which implements that policy. The halon replacement modification is the implementation of a This modification changes the engine compartment fire supression system in all Abrams tank variants. The retrofit Presidential directive.

	ACCOMPLISHED	1093	3Q94	2096	4Q96			
ES:	PLANNED	1093	1094	2096	3036	2097	3097	4097
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		Preliminary Design Review:	Critical Design Review:	Contractor Test and Evaluation:	Development Test and Evaluation:	Inital Operational Test and Evaluation:	IPR Production Decision	TDP Available:

					S	IVIDUA	INDIVIDUAL MODIFICATION	FICATIC	Z							Date		Februs	February 1997	
MODIFICATION TITLE (Cont):		ヹ	alon R	Halon Replace	ement		1-92-05-4411	4411												
FINANCIAL PLAN: (\$ in Millions)	FY 1996	92																		
	and Prior	Į.	FY 1997	266	FY 1998	966	FY 1999	666	FY 2000	000	FY 2001	100	FY2	FY 2002	FY 2003	003	F	77	TOTAL	AL
	Αįσ	€	ð	\$	ğ	\$	ğ	ક્ર	ģ	\$	ğ	\$	φ	49	Q.	\$	Q.	€	Qt	₩
RDT&E																				
PROCUREMENT																				
Kit Quantity	0				1080		1080		1080		1080		1080		848				6248	
Installation Kits	•							-												
Installation Kits Nonrecurring																				
Equipment						4.0		4.0	-	4.3		4.2		4.4		3.6				24.5
Equipment Nonrecurring		-		-																
Engineering Change Orders														_			-			
Engineering & Source Select		7.4		4.1			•													8.8
Training Equipment															-					
Support Equipment								-												
Other [In - House Support]				0.1		0.1		0.1		0.1		0.1		0.1						0.6
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt Kits													*							_
FY 1997 Eqpt Kits						•				-			waren of even factors							
FY 1998 Eqpt Kits 1080							1080	2.7				-							1080	2.7
FY 1999 Eqpt Kits 1080									1080	2.9		•							1080	2.9
FY 2000 Eqpt kits 1080											1080	2.9							1080	2.9
FY 2001 Eqpt kits 1080													1080	3.0					1080	3.0
FY 2002 Eqpt kits 1080									-		•••			****	1080	3.0			1080	3.0
FY 2003 Eqpt kits 848																	848	2.4	848	2.4
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost							1080	2.7	1080	2.9	1080	2.9	1080	3.0	98	3.0	848	2.4	6248	16.9
Total Procurement Cost		7.4		1.5		4.1		6.8		7.3		7.2		7.5		9.9		2.4		50.8
METHOD OF IMPLEMENTATION: Contractor/Depot Teams	Contracto	r/Depc	of Team		SINIMO	STRAT	ADMINISTRATIVE I FADTIME:	DTIME		٥	Months		ווטטמי	PRODUCTION I FADTIME:	FADT	į Į	ď	Months		
Contract Dates:	Ŧ	FY 1997:				_	FY 1998:	i 		86			FY 1999:	,) 	Ą	JAN 99		2		
Delivery Date:	£	FY 1997:				_	FY 1998:		7	JUL 98		•	FY 1999:	<u>.</u> .	JJ.	JL 99				
																- 1				



ı				İ												
Installation Schedule:	alon Re	4411							Date	0	Febru	February 1997				
FY 1996	6 FY 1997	FY 1998		ш	FY 1999			FY 2000	8		FY 2001	=				
& Prior	1 2 3 4 1	6 1	41	1 2	m	41		O.	g	4		හ 41	2			Total
Inputs																
FY 1996 & Prior																
FY 1997																
FY 1998			300	300	300 180	_										1080
FY 1999					120	300	300	300	09							1080
o di cataloni																
Outputs																
FY 1996 & Prior																
FY 1997																-
FY 1998				270 2	270 270	270										1080
FY 1999							270	270	270	270						1080
74.																
	FY 2000	FY 2001		FY.	FY 2002			FY 2003			FY 2004			FY 2005		
	1 2 3 4 1	2 3	4	_	2 3	4	-	8	ဗ	4	1 2	က	4	8	3 4	Total
Inputs																
FY 2000	260 300 300	220														1080
FY 2001		80 300	300	300 10	100											1080
FY 2002				ฉ	200 300	300	280									1080
FY 2003							20	300	300	228						848
Outputs																
FY 2000	270	270 270	270													1080
FY 2001				270 27	270 270	270										1080
FY 2002							270	270	270	270						1080
FY 2003										2	270 270	270 38	8			848
Remarks:																
6847ea represents the tot	6847ea represents the total Abrams tank fleet, all models.															
																-

Item No. 20 Page 7 of 55 193

	INDIVIDUAL MODIFICATION	Date	Fahrisay 1997
MODIFICATION TITLE:	Drivers Hatch Interlock TBD1		
MODELS OF SYSTEMS AFFECTED:	M1 = 355; IPM1 = 892; M1A1 = 4351; M1A2 = 0	TOTAL ROMT = 5598	
DESCRIPTION / JUSTIFICATION:			

extending his head outside the hatch while the turret was being rotated. The DHI will assure that similar accldents will not occur in The Driver's Hatch Interlock (DHI) is a SAFETY Modification which provides an electronic interface between the Driver's Hatch and In the recent past there have been several accidents in the field where the driver has been injured or killed by inadvertently the Turret Drive (Rotation) controls. Its purpose is to proclude Turret rotation while the Driver's Hatch is open. the future. Without this funding, the potential exists for additional driver accidents or fatalities.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MII FSTONES:		
Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	2096	2Q96
Critical Design Review:	3096	3Q96
Contractor Test and Evaluation:	N/A	N/A
Development Test and Evaluation:	4096	4096
Inital Operational Test and Evaluation:	A/N	N/A
IPR Production Decision	4Q96	4096
TDP Available:	1097	1097

Ication

					2	VIDUAL	INDIVIDUAL MODIFICATION	ICATIO	z				1		1	Date		Februs	February 1997	
MODIFICATION TITLE (Cont):		۵	Drivers Hatch	Hatch	Interlock	Sc	ТВО1													
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996	966				-			100	-		-								
	Oft State	<u> </u>	1 AO	\66 66	<u>2</u> €	\$66	8 1999 Otv 1999	╁	- Y 2000	+	1 2 2007 Y	5 4	-Y 2002	ž c	FY 2003	S 4	<u>၁</u> နိ	€	TOTAL	AL *
RDT&E PROCUREMENT								<u> </u>		<u> </u>				,	î	•	3	+	6	
Kit Quantity Installation Kits			4758							-							1247		6005	
Installation Kits Nonrecurring																				
Equipment				16.0					····									5.1		21.1
Equipment Nonrecurring Engineering Change Orders		•												• • • • • • • • • • • • • • • • • • • •		-				
Data																				
Training Equipment							_													
Support Equipment									····											
Other																			····	-
Interim Contractor Support			-							····										
																				
Installation of Hardware																				
FY 1996 & Prior Eqpt Kits											-									
FY 1997 Eqpt Kits 4758					2600	9.9	2158	6.0											4758	12.6
FY 1998 Eqpt Kits																				
FY 1999 Eqpt Kits									***									·		
FY 2000 Eqpt Kits																				
FY 2001 Eqpt Kits						,			- Carlo				-	•		•				
FY 2002 Eqpt Kits			•																	
t Kits						•														
(FY(TC) Eqpt 1247											_	_					1247	4.1	1247	4.1
Total Installation Cost					2600	9.9	2158	6.0									1247	4.1	6005	16.7
Total Procurement Cost				16.0		9.9		0.9										9.5		37.8
					ì	į	į	;				•	1	į	i	!		;		
METHOD OF IMPLEMENTATION: Enter Method Contr. Inst.	i: Enter Mi	Method C	Contr.	- 0	AUMINI.	HAHIS	ADMINISTRATIVE LEADTIME:	JIME:		Š	Months	aL L	DGOH,	PRODUCTION LEADTIME: EX 1990:	LEADT	ME:	9	Months		
Contract Dates: Delivery Date:		FY 1997: FY 1997:		,,	, 6	. "	FY 1998:					ı u	FY 1999: FY 1999:							
called care.	•											-								



	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	Vehicle Intercommunications System (VIS) 1-92-05-4412		
MODELS OF SYSTEMS AFFECTED:	M1 = 0; IPM1 = 0; M1A1 = 4351; and M1A2 = 181	4532	
DESCRIPTION / JUSTIFICATION:			

communications. It replaces the AN / VIC - 1 which is technologically obsolete, difficult to maintain and susceptible to electronic countermeasures. VIS is a State - of - the - Art replacement which has none of these drawbacks. This is a congressionally mandated program. Note that the milestones below are for USA CECOM, the "A" proponent for the VIS program. Current funding will cover retrofit of M1A2's produced prior to production cut - in and all M1A1's. The Vehicle Intercommunications System [VIS] is an intercom for intercrew communications and a radio for tank to tank direct

USER PRIORITY: 13

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		CLI TO TOP TOP TO
Preliminary Design Review:	N/A	NA
Critical Design Review:	N/A	N/A
Contractor Test and Evaluation:	N/A	N/A
Development Test and Evaluation:	4092	2092
Inital Operational Test and Evaluation:	3094	4094
IPR Production Decision	4092	4092
TDP Available:	N/A	WA

					S	IVIDUA	INDIVIDUAL MODIFICATION	-ICATIO	Ž							Sate		Tobarron 1007	. 1007	
MODIFICATION TITLE (Cont):		×	Vehicle Interco	Interc	nmmo	nicatio	mmunications System (VIS) 1-92-05-4412	stem (VIS) 1	-92-05	-4412				<u> </u>			Lenina	y 1897	
FINANCIAL PLAN: (\$ in Millions)																				
	and Prior	Prior	FY 1997	766	FY 1998	866	FY 1999	66	FY 2000	- S	FY 2001	<u>-</u>	EV 2002	60	EV 2003	- 2 2	F		TOT	
	Q Q	69	ğ	69	ð	\$	₹	8	₹	69	Ì ĕ	69	} - }	¥ 45	ð	3 4	2 2	U	2	1
RDT&E											+				1	 	<u>}</u>	>	3	9
PHOCOREMEN!																		-		
Kit Quantity	2568		655		655		654			•									4532	
Installation Kits									******											
Installation Kits Nonrecurring																		-		
Equipment		22.9		5.7		5.4		4.8												0 00
Equipment Nonrecurring						••	•					-								30.0
Engineering Change Orders		0.2		-												-			-	Č
Testing		0.2																		0.0
Training Equipment											•	-								0.7
Support Equipment										-										
Other [In - House Support]		1.7		0.1			_							-	-		_			7
Interim Contractor Support		0.5									-									
					-															
in the state of th																				
EV 1006 9 Date Fact 0500	9,7	-	i I	(ļ		-													
1 1990 & FIIO! Eqpl - 2308	1400		7.67	8.0	376	0.3													2568	2.2
					404	0.3	251	0.2											655	0.5
							529	0.4	126	0.1									655	0.5
FY 1999 Eqpt Kits 654		-							654	0.5									7 2 2	
FY 2000 Eqpt kits									}	?							-	-	924	o.
FY 2001 Eqpt kits						•			-										•	
FY 2002 Eapt kits										_			-							
FY 2003 Eant kits			-							-										
SIN = Idpa COD = 1																	· · · · · ·	-		
Total Installation Cost	00,	†;	-	1		+		+		+	\dashv		1	\dashv	1	-				
Cial Installation Cost	3	1	78/	p O	8	9.0	980	9.0	8	9.0			-						4532	3.7
l otal Procurement Cost		26.6	-	9.9		6.0		5.4		9.0	_							_	-	45.2
METHOD OF IMPLEMENTATION: Depot Field Team	Depot F	leld Tea			DMINIS	TRATIV	ADMINISTRATIVE LEADTIME:	TIME			Months	ā	PODUC	TION L	PRODUCTION LEADTIME:	ய்	Mo Mo	Months		
Contract Dates: Delivery Date:	LL	FY 1997: FY 1997:		SEP 97		LLÚ	FY 1998: EV 1998:		ഗ് ₹	SEP 98		ωí	FY 1999:		SEP					
						-	1990.		ò		-	Ĺ	FY 1999:		JAN	00				



Installation Schedule:		hicle	Interc	muo	unica	Vehicle Intercommunications System (VIS) 1-92-05-4412	Syster] 	1-9	2-02-7	1412					Date	_		February 1997	_				
<u></u>	FY 1996		FY 1997	266			FY 1998	986			FY 1999	66			FY 2000	_		FY 2001	100					
	& Prior	+	01	r)	41	-	αı	ଠା	41		C I	(C)	41	ᆏ	21 83	41	1	QI.	ଠା	41				Total
Inputs																								
FY 1996 & Prior	1860	200	200	200	108																			2568
FY 1997					92	200	200	163																655
FY 1998								37	200	200	200	8												655
FY 1999												182	200	200	75									654
Outputs																								
FY 1996 & Prior	1400	198	198	198	198	195	181																	2568
FY 1997							4	195	195	195	26													655
FY 1998											139	195	195	126										655
FY 1999														69	195	195 1	195							654
		•	200			_	2	_		£	2000			í	2000))	•		ì	200		
		•	200	» د	4	•		۰ -	7	-	r 1 2002		٧	L -	2003	ď	7	1 1 200	e ŧ	7	Ī -	2003	ď	1 Total
Inputs		-	1	•	•	•	1	•	٠	•	ı	•	•	•	ı)	•	-		•	-	1	,	
0000 7.1																								
FY 2000																								
FY 2001																								
FY 2002																								
FY 2003																								
Outputs																								
FY 2000																								
FY 2001																								
FY 2002																								
FY 2003																								
Remarks:																								

ION Date February 1997	-89-05-4226
INDIVIDUAL MODIFICATION	MODIFICATION TITLE: Armament Enhancement Initiative (AEI) 1-89-05-4226

MODELS OF SYSTEMS AFFECTED: M1A1 Only (4351ea.)

DESCRIPTION / JUSTIFICATION:

The Armament Enhancement Initiative is a high priority program to improve the lethality of the Abrams Tank by improving the tank ammunition. This modification allows the 120mm equipped tank fleet to accept ammunition round upgrades through improvements to the fire control system via new ballistic solutions and reticle changes. The ammunition round upgrades will significantly improve kill probabilities for the fielded M1A1 fleet. Finally, this program includes the upgrade of the first 1629ea M1A1 gun mounts to the higher pressure AEI configuration [The balance of delivered gun mounts were supplied in this configuration for production].

USER PRIORITY: #1.

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	ļ	ACCOMPLISHED
Preliminary Design Review:	2Q91	3Q91
Critical Design Review:	3091	4Q91
Contractor Test and Evaluation:	3091	4Q91
Development Test and Evaluation:	N/A	N/A
Inital Operational Test and Evaluation:	4091	1Q92
IPR Production Decision	N/A	N/A
TDP Available:	2092	1092

					=	DIVIDL	AL MO	INDIVIDUAL MODIFICATION	NO							Date		Febru	February 1997	
MODIFICATION TITLE (Cont):		<	Armament En	ent E	nhanc	emen	t Initia	hancement Initiative (AEI) 1-89-05-4226	∃I) 1-8	9-05-4	1226									
FINANCIAL PLAN: (\$ in Millions)	Ž	1006	<u>.</u>													ı				
	au	and Prior	¥	FY 1997	F	FY 1998	F.	FY 1999	FY	FY 2000	FY 2001	100	FY 2002	002	FY 2003	003		70	TOTAL	AL.
	Qfy	\$	Q.	ક્ક	ğ	₩	ğ	8	ğ	s	Q.	69	ð	89	ð	89	ð	s	ð	€9
RDT&E					_															
PROCUREMENT																				
Kit Quantity	4351																		4351	
Installation Kits																_				
Installation Kits Nonrecurring																-				
Equipment		26.4																		26.4
Equipment Nonrecurring																				
Engineering Change Orders																				
In/House Support		3.2																		3.2
Training Equipment				*****				<u>.</u>												
Support Equipment						<u></u>														
Other [Gun-Mount Rebuild]		15.2																		15.2
Interim Contractor Support																			 · · · ·	
Installation of Hardware																·				
FY 1996 & Prior Eqpt - 4351	4201	15.3	150	0.4												·			4351	15.7
FY 1997 Eqpt Kits																				
FY 1998 Eqpt Kits																				
FY 1999 Eqpt Kits																				
FY 2000 Eqpt kits																				
FY 2001 Eqpt kits																				
FY 2002 Eqpt kits																				
FY 2003 Eqpt kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	4201	15.3	150	0.4	-														4351	15.7
Total Procurement Cost		60.1		0.4		_		-												60.5
																				_
METHOD OF IMPLEMENTATION: See Remarks	Z: See R	emarks			ADMI	MISTRA	TIVEL	ADMINISTRATIVE LEADTIME:		, 2	Months		PRODU	CTION	PRODUCTION LEADTIME:	IME:	က	Months		
Contract Dates:		FY 1997: EV 1997:	:: ·				FY 1998:	98:		Nov-96			FY 1999: EV 1999:	<u></u>						
Delively Date.		661					-	.00.		2			3661 1.1							

Installation Schedule:	l	Armament Enhancement Initiative (AEI) 1-	nt En	hance	ment	Initia	live (A	E) 1	-89-05-4226	-4226						Date			February 1997	1997		i			
-	FY 1996		FY 1997	26 t			FY 1998	86		_	FY 1999	6		Ĺ	FY 2000			Ĺ	FY 2001	į					
	& Prior	-	~1	က	4		QI	(C)	41	-	o,	3	-		m	4	-	٥	C.	4				·	Total
Inputs																		1		Н					P C
FY 1996 & Prior	4351															4									71.07
FY 1997																									-C2
FY 1998																									
FY 1999																									
Outputs																									
FY 1996 & Prior	4201	4	4	4	30																				4264
FY 1997																									
FY 1998																									
FY 1999																									
																									-
		ш	FY 2000			Ĺ	FY 2001			£	FY 2002			FY 2003	500			FY 2004	204			FY 2005	:_		
		-	8	ო	4	-	8	က	4	_	8	၈	4	_	N N	က	4		2	4	-	8	m	4	Total
Inputs																						ľ)		<u> </u>
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003			-																						
Remarks:																									Τ
																									-



MPLEMENTATION: Gun mounts by RIA team, reticles by contractor team, application by depot team.

	INDIVIDUAL MODIFICATION Date	February 1997	П
MODIFICATION TITLE:	Precision Lightweight GPS Receiver (PLGR) 1-92-05-4417		
MODELS OF SYSTEMS AFFECTED:	M1 = O; IPM1 = 0; M1A1 = 4351; M1A2 = 0 TOTAL RQMT = 4351ea		
			_

DESCRIPTION / JUSTIFICATION:

The Precision Lightweight GPS Receiver [PLGR] is a self-contained unit which can collect and process GPS satellite signals and derive Position [To within 10 meters], Velocity and Time [PVT]. The funding shown is for the PLGR Installation Kit only; the PLGR units will be procured and provided to PM Abrams by PM GPS.

USER PRIORITY: 3

DEVELOPMENT ST,	DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		
		PLANNED AC	ACCOMPLISHED
Preli	Preliminary Design Review:		2091
Critic	Critical Design Review:	4Q91	4Q91
Cont	Contractor Test and Evaluation:	3Q93	3Q93
Deve	Development Test and Evaluation:	3Q93	3Q93
Inital	Inital Operational Test and Evaluation:	2094	2094
IPRI	IPR Production Decision	4094	4094
TDP	TDP Available:	3Q96	

					<u>QN</u>	VIDUAL	INDIVIDUAL MODIFICATION	ICATIO	z							oto C		Too a second	100,	
MODIFICATION TITLE (Cont):		P	ecisio	n Ligh	tweigh	t GPS	Precision Lightweight GPS Receiver (PLGR) 1-92-05-4417	ver (P	LGR)	1-92-(35-441	17						90108	1881	
FINANCIAL PLAN: (\$ in Millions)	FV 1996	900																		
	and Prior	rior	FY 1997	266	FY 1998	198	FY 1999	66	FY 2000	8	FY 2001	100	FY 2002	202	FY 2003	03	TC		TOTAL	Ī
	ਰੈ	\$	ð	\$	ð	(S)	ਰੇ	€9	Q Q	\$	Qty	\$	ğ	\$	ŧ	\$	ð	\$	§ ĕ	- W
PROCUREMENT																				
Kit Quantity	2383		200		200		20		468			•								
Installation Kits	}	5.0	}	1,2	3	12	3	- 2	9	7									4351	Ġ
Installation Kits Nonrecurring								!		!									-	8.6
Equipment																				
Equipment Nonrecurring												_						-		
Engineering Change Orders																			-	
Data																				
Training Equipment																				
Support Equipment			-																	
Other [In/House Support]																				
Interim Contractor Support									-							-				
																			_	
Installation of Hardware																				
FY 1996 & Prior Ernt Kits	2383	1				<u> </u>										· 				
TV 4003 T = 1015	2007	<u>:</u>				-								-					2383	1.7
FY 1997 Eqpt Kits					200	4.0			-										200	0.4
FY 1998 Eqpt Kits							200	0.4											200	0.4
FY 1999 Eqpt Kits									200	0.4									טטי	70
FY 2000 Eqpt Kits						-					468	0.4		۸,		-			98	5 6
FY 2001 Eqpt Kits											}								001	
FY 2002 Eqpt Kits					-					_										
FY 2003 Eapt Kits				-																
(FY/TC) Egot (xx kits)					-														•	
	2283	12	\dagger	-	S	3	200		000	+	- -	†;	-	\dagger	+	+	+	+		
H	3		\dagger	+	3	5	3		3	3	408	0.4 4	1	-		-			4351	3.3
lotal Procurement Cost		6.7	-	1:2	-	1.6	_	1.6	\dashv	1.6	-	0.4	_							13.1
METHOD OF IMPLEMENTATION: Depot Field Team	Depot	Field Tea		₹	DMINIS	TRATIV	DMINISTRATIVE LEADTIME:	TIME:		2 MG	Months	ā	RODUC	TION L	PRODUCTION LEADTIME:	ij	2 M	Months		
Contract Dates:	Ĺ í	FY 1997: EV 1907:		Mar-97		Œί	FY 1998:		\$.	Mar-98		Ĺ	FY 1999:		Mar-99	66-				
College Date.		1997.		/e-fin			r 1998:		7	Aug-98			FY 1999:		Aug	Aug-99				

Installation Schedule:		sion	Ligh	weig	1 GP	S Re	Precision Lightweight GPS Receiver (PL	(PLG	GR) 1-92-05-4417	32-05	4417					Date	۰		Febru	February 1997					
	FY 1996		FY 1997	97	•		FY 1998	. 86			FY 1999	99			FY 2000				FY 2001	` <u>=</u>					
	& Prior 1		QI	ଚା	41	-	αı	m	41		01		41	-	ΟI		4	-	Q	<u>ල</u>	4				Total
Inputs																		ł		í	ſ				4
FY 1996 & Prior	2383																								2383
FY 1997					80	150	150	120																	í
FY 1998								30	150	150	150	20													500
FY 1999													150	150	02										200
Outputs																									
FY 1996 & Prior	2383																								ì
FY 1997																									2383
FY 1998						125	125	125	125																200
FY 1999										125	125	125	125												
													Ì												i)
		Ţ	FY 2000			ш.	FY 2001			Œ	FY 2002			Ŧ	FY 2003			Œ	FY 2004			FY 2005	200		
		_	8	ო	4	-	8	က	4	-	0	က	4	-	8	က	4	-	8	ო	4	-	0	က	4 Total
Inputs																									
FY 2000			80	150	150	88																			468
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000	12	125 1	125	125	125																				200
FY 2001						125	125	125	93																468
FY 2002																									-
FY 2003											i														
Remarks:																									

Live Fire Category A consists of the following M1A1 Tank modifications: [1.] Independent Manual Blaster, [2.] Driver's / Loader's Hatch Ballistic Rims, [3.] AFES Wiring Harness Ballistic Protection and [4.] Driver's / Loader's Hatch Latch Mechanism. Each of these modifications corrects a deficiency relating to tank survivability found during Live - Fire testing. These modifications will be procured together and applied concurrently as a portion of Block G.

USER PRIORITIES: 2d, 2e, 4a, 4b

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		
	PLANNED	ACCOMPLISHED
Preliminary Design Review:	2089	2Q89
Critical Design Review:	1091	1091
Contractor Test and Evaluation:	4091	4091
Development Test and Evaluation:	N/A	N/A
Inital Operational Test and Evaluation:	N/A	N/A
IPR Production Decision	2092	2092
TDP Avallable:	4092	4092

					IONI	VIDUAL	INDIVIDUAL MODIFICATION	ICATIO	2							Date		Febru	February 1997	
MODIFICATION TITLE (Cont):			Live Fire Cate	Cate	gory A	(LFC	(LFCA) 1-89-05-4230	9-05-4	230											
FINANCIAL PLAN: (\$ in Millions)	Š	EV 1006										:								
	and	and Prior	FY 1997	266	FY 1998	86	FY 1999	66	FY 2000	8	FY 2001	- -	FY 2002	8	FY 2003	503	10		TOTAL	Ar.
	₹	ક્ક	ð	မာ	ģ	69	ð	€9	ð	\$	ð	8	₹	\$	ð	es	₹	s	₹	es.
RDT&E PROCUREMENT																				
Kit Quantity	2010		391		390		330		330		390		330						4351	
Installation Kits												<u></u>								
Equipment		8.6	-	Ξ		Ξ:		=		5.		1.3		1.3						16.9
Equipment Nonrecurring		-							··-											
Engineering Change Orders													<u>-</u> ,							
Training Equipment														·						
Support Equipment																				
Other [In / House Support]		0.1		0.1		0.1		0.1		0.1				0.1						9.0
Interim Contractor Support												-								
											-									
Installation of Hardware										•										
FY 1996 & Prior Eqpt - 2010	1400	4.5	610	3.6															2010	8.1
			139	1.0	252	1.5	<u> </u>												391	2.5
					139	0.	251	5.			-								390	2.5
							139	0.	251	9.	į								390	2.6
FY 2000 Eqpt 390									66 66 67	Ξ	251	9. 0	25.1	9					390	2.7
											}	?	139	-	251	8.			390	2.9
FY 2003 Eqpt kits																				
(FY(TC) Eqpt (xx kits)	1400	2	749	4 6	39	2.5	390	о п	390	27	90	90	300	7,0	25.4	Ť			4364	0 00
Total Drougament Cost	201	2 2		2 4	3	2 6	+	2 6	3	1	3	2 0	3	į	2	9			2	2.5.3
Total Floculement Cost		7		0.0		, 5	1	7,9	1	2.4	1	6.9		-		<u>•</u>				41.4
METHOD OF IMPLEMENTATION: Contractor Field Team	!: Contr	actor Fiel	eld Team	2	DMINIS	TRATIV	ADMINISTRATIVE LEADTIME:	TIME:	=	7 ₹	Months	פינ	PRODUCTION LEADTIME:	TION	-EADTI		2	Months		-
Delivery Date:		FY 1997:		70F 97		. iL	FY 1998:		5 3			L LL	FY 1999:		- ,	S S NOT	o _			
									l	١					ľ		Ì			

Installation Schedule:		e Fire	Cate	gory	A (LF	CA) 1	Live Fire Category A (LFCA) 1-89-05-423		0							Date			February 1997	1997					
	FY 1996	•	FY 1997	266	•	•	FY 1998	8 0			7 190				720	•	,		7 200						
•	5	-1	U	Oj.	#!	-	NI.	rol Icr	41	.w	N.		44 L	NI	rol	41	- 	CVII	m	4 1					Total
Inputs																									
FY 1996 & Prior	1510	175	175	150																					2010
FY 1997				22	175	90	9																		391
FY 1998							o	9	100	100	81														390
FY 1999											19 1	100	100	100	71										390
Outputs																									
FY 1996 & Prior	1400	187	187	187	49																				2010
FY 1997					139	86	86	99																	391
FY 1998								42	86	86	86	54													390
FY 1999													86	86	98	52									300
																ı									000
		u.	FY 2000	_		ш	FY 2001			£	FY 2002			FΥ2	FY 2003			FY 2004	904			FY 2005	ī.		
		-	8	ო	4	-	84	က	4	_	8	က	4	_	8	ຶ່	4	-	8	3 4	-	N	က	4	Total
Inputs																									
FY 2000			53	9	9	100	61																		390
FY 2001							33	100	100	100	51														390
FY 2002										-	49	100	100	100	41										360
FY 2003																									
Outputs																									
FY 2000				46	6	86	86	50																	C
FY 2001						:	<u> </u>	. 6	ĕ	ĕ	ď	ŭ.													080
FY 2002								2					e e	0	98 54	-									080
FY 2003																									000
Remarks:																									

V TITLE:	INDIVIDUAL MODIFICATION Date February 1997	Battlefield Override (BF/OR) 1-89-05-4229	TED: M1 = 0; IPM1 = 0; M1A1 = 3850; and M1A2 = 407 TOTAL RQMT: 4257EA
[a] [a]		AODIFICATION TITLE: Batt	AFFECTED:

DESCRIPTION / JUSTIFICATION:

use in combat situations ONLY; has no peace - time recovery role and is based on the premise that crew / tank self recovery takes battlefield when normal fuel flow, engine control or transmission shifting have been lost through battle damage. It is designed for Battlefield Override is a completely mechanical fuel, engine control, and transmission bypass requiring NO primary or back - up priority over potential engine or transmission damage resulting from uncontrolled operations. This modification will significantly electrical system for operation. The purpose of Battlefield Override is to allow an Abrams Tank to extricate itself from the improve crew / tank survivability in a combat environment.

USER PRIORITY - 3

DPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	ANNED	ACCOMPLISHED
Preliminary Design Review:	4091	4091
Critical Design Review:	1092	2092
Contractor Test and Evaluation:	2092	3Q92
Development Test and Evaluation:	1093	3Q93
Inital Operational Test and Evaluation:	V /V	N/A
IPR Production Decision	1093	3093
TDP Available:	3094	1095

					<u>N</u>	IVIDUA	INDIVIDUAL MODIFICATION	CATIO	z							Date		Febru	February 1997	
MODIFICATION TITLE (Cont):		B B	attlefik	Battlefield Override	erride		(BF/OR) 1-89-05-4229	9-05-4	229											
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996	966																		
	ang S	and Prior	FY 1997	266	FY 1998	866	FY 1999	+	FY 2000	8 6	FY 2001	100	FY 2002	205	FY 2003	5003		2	TOTAL	TAL,
RDT&E		•	(1)	•	3	•	3	+	 -	9	3	P	3	A	3	A	3	9	<u>}</u>	9
PROCUREMENT																				
Kit Quantity	2435		333		333		333		333		333		332						4432	_
Installation Kits)		}						7	
Installation Kits Nonrecurring																				
Equipment		9.9		6.0		6.0		0.9		9.0		0.5		0.4						10.8
Equipment Nonrecurring						-								i						2
Engineering Change Orders		- :								_										-
Engineering / Testing		0.2							-				-							
Training Equipment																				5
Support Equipment											-									
Other (Spares Kits)		_												_						
Interim Contractor Support								-					-							
			-								-									
Installation of Hardware																				
EV 1996 & Prior East - 2435	1400	7	667	c	000	7	ç	,		-										
EV 1007 East Kits 222	77	?	<u> </u>	3	2	<u>:</u>	2 (- i	_										2435	6.1
				-			320	<u>c</u> .	<u> </u>	 									333	1.6
									320	- -	13	0.1							333	1.2
			_								320	0.2	13	0.1					333	0.3
FY 2000 Eqpt kits 333									-		-		320	0.3	13	0.1			333	0.4
FY 2001 Eqpt kits 333															320	0.3	5	0.1	333	0.4
FY 2002 Eqpt kits 332															;		332	0	330	
FY 2003 Eqpt kits	-															-	3	?	3	5
(FY(TC) Eqpt (xx kits)					- 1-						<u>_</u>									
Total Installation Cost	1422	9	299	3.3	333	1.7	333	1.6	333	12	333	6	333	4	333	0	345	Š	4430	40.0
Total Broggingment Cont		6		1	T	1			+	1	1			;	3		3	5	704	25
		6.9		4.2	1	5.6	-	2.5	\dashv	8.	\dashv	0.8		0.8		0.4		0.4		22.4
METHOD OF IMPLEMENTATION: Depot Field Team	: Depot	Field Te			DMINIS	TRATIV	ADMINISTRATIVE LEADTIME	TIME			Months	<u>α</u>	RODUC	TION	PRODUCTION LEADTIME:	ME	9	Months		
Confract Dates:	<u>.</u> L	FY 1997: FX 4007:		MAY 97		шí	FY 1998:		ž			LL i	FY 1999:		MAY					
Delivery Date.	-	FY 1997:				_	FY 1998:		ž	NOV 98		ш	FY 1999:		ž	86 AON				

Installation Schedule:	I	ttlefie	Ŏ	erride	; (BF/	OR)	Battlefield Override (BF/OR) 1-89-05-4229	5-422	6							Date			February 1997	y 1997					Γ
Ľ.	FY 1996		FY 1997	266	•	•	FY 1998	98			FY 1999	66			FY 2000	0		_	FY 2001						
	& Prior	Ħ	αı	(C)	41	-	αı	ෆ i	41	-	αı	(C)	41	+	ο ι	ල 	41		6 1	41	-			ō	Total
Inputs																									
FY 1996 & Prior	1596	175	175	175	175	139																		5	2435
FY 1997						Ξ	150	150	22															.,	333
FY 1998									128	9	100	ည												.,	333
FY 1999												92	100	100	38				-					~/	333
																									••••
Outputs																									
FY 1996 & Prior	1422	167	167	167	166	84	83	83	8	5														Ň	2435
FY 1997										7	83	83	83	13										. ,	333
FY 1998														7	8	83	83	13						.,	333
FY 1999																		7	83	83 8	83	13		.,	333
			FY 2000	0		4	FY 2001			Ĺ	FY 2002			Œ	FY 2003			F	FY 2004			FY 2005	ıc		
		-	8	က	4	-	81	က	4	-	8	က	4	-	8	ဗ	4	-	7	ဗ	4	1 2	က	4 Iol	Total
Inputs																									
FY 2000			62	9	100	7																		.,	333
FY 2001						59	100	100	100	4														.,	333
FY 2002										96	100	100	36											.,	332
FY 2003																									
																		`							
Carpars						ì	ć	8	ć	ç														•	- 6
FY 2000						7	83	8		3								-							333
FY 2001										7	83	83	83	13										••	333
FY 2002														7	83	83	83	12							332
FY 2003																									
Remarks:																									

	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	Live Fire Category B (LFCB) 1-94-05-4481		
MODELS OF SYSTEMS AFFECTED:	M1 = 0; IPM1 = 0; M1A1 = 4351; M1A2 = 81	TOTAL RQMT = 4432ea	

Live Fire Category B includes the following individual modifications: [1.] Improved Gunners Station, [2.] Smoke Generator Fuel Line and [3.] Turret Ammunition Door Locking Mechanism. Each of these modifications corrects a vehicle deficiency found during Live Fire Testing. These modifications will be procured and applied simultaneously as a portion of Block G.

DESCRIPTION / JUSTIFICATION:

USER PRIORITY: 4c

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		
	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	N/A
Critical Design Review:	4093	4093
Contractor Test and Evaluation:	A/N	N/A
Development Test and Evaluation:	1094	1094
Inital Operational Test and Evaluation:	N/A	N/A
IPR Production Decision	4093	4Q93
TDP Available:	2094	4094

fication

					Z	INDIVIDUAL MODIFICATION	MODIF	-ICATIC	Ž							Date		Februs	February 1997	
MODIFICATION TITLE (Cont):			ive Fir	Live Fire Cate	g		(LFCB) 1-94-05-4481	4-05-	4481											
FINANCIAL PLAN: (\$ in Millions)	Ę	FY 1996																		
	and	and Prior	ᅜ	FY 1997	FY1	FY 1998	FY 1999	660	FY 2000	8	FY 2001	701	FY 2002	302	FY 2003	903		10	TOTAL	A.
	ð	\$	ά	\$	Qţ	ક્ક	ģ	€>	Oţ,	\$	Ş Ş	\$	Q Q	€9	ğ	89	ð	69	ð	€
RDT&E PROCUREMENT																-				
Kit Quantity Installation Kits	2010		40 4		404		404		404		404	•	402						4432	
Installation Kits Nonrecurring																				
Equipment		0.7		0.2		0.2		0.2		0.1		0.1		0.1		-				1.6
Equipment Nonrecurring					-											·	7.			
Engineeming Change Chaes Data										- · <u>-</u>										
Training Equipment						·														
Support Equipment									-											
Other In / House Support		0.1																		0.1
Interim Contractor Support					·															
																•				
Installation of Hardware																				
FY 1996 & Prior Eqpt - 2010	1058	1.6	952	1.5															2010	3.1
					404	9.0			-										404	9.0
							404	9.0											404	9.0
		_							404	0.7									404	0.7
											404	0.7							404	0.7
		_					··· - · · · · · · · · · · · · · · · · ·						404	0.7	_				404	0.7
FY 2002 Eqpt kits 402															402	9.0			402	0.6
FY 2003 Eqpt kits\\\												-	•							
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	1058	1.6	852	1.5	404	9.0	404	9.0	404	0.7	404	0.7	404	0.7	402	9.0			4432	7.0
Total Procurement Cost		2.4		1.7		0.8		0.8		0.8		9.0		9.0		9.0				8.7
A FINE TO TO TO THE PERSON OF		† 7	į			į	į	1			:	•			į	1				
METHOD OF IMPLEMENTATION: Debot Field Teams Contract Dates:	V: Debol	FIBID 188	eams 7.			ADMINISTRATIVE LEADTIME:	VE LEAL	O I ME:	=	2 go	Months	ı. u	PRODUCTION LEADTIME:	CTION	LEADT		ص ص	Months		-
Collifact Dates.		FY 1997:	: ~:	ם בי	97	_	1330. FY 1998:		, <u> </u>			LU	FY 1999: FY 1999:		ין בי	JUL 39				
control caro:				•								-	1999		5					

Library Constitution	1	i	(
Installation Scriedule: LIVE FIRE Category B (LFCB) 1-94-05-4481		₽	e Cat	egon	/B	FCB)	1-94-	05-44	~							۵	Date		Februa	February 1997					
	FY 1996		7	FY 1997			F	FY 1998			FY 1999	999			FY 2000	00			FY 2001	-					
	& Prior	-1	ΟĬ	M	41		O.	m	ঝ	-	C)	(0)	4	•	N.	ო	4	-	α.	24					F foto
Inputs											i	ı	I	I	ı	,	1								121
FY 1996 & Prior	1410	150	150	150	150	_																			Š
FY 1997						110	110	110	74																2010
FY 1998									36	110	110	110	38												} {
FY 1999													72	110	110	110	N								404
C																									
EV 1996 & Prior	4058	930	900	000	ć																				
TV 4007	2																								2010
FY 1997						<u></u>	-	<u></u>	5																404
FY 1998										5	101	ᅙ	10												404
FY 1999														101	101	101	101								404
			FY 2000	2			FY 2001	-		ıL	FY 2002			ĹL	FY 2003			Ŧ	FY 2004			FY 2005	35		
		-	7	က	4	-	8	က	4	-	7	က	4	-	8	ဗ	4	-	8	က	4	1 2	m	4	Total
Inputs																									
FY 2000					108	110	110	9/																	407
FY 2001								34	110	110	110	40													404
FY 2002												2	110	110	110	~									6
FY 2003															•	I									Ť
Outputs							•																		
FY 2000						101	101 101	101	101																Š
FY 2001										101	101	101	101												100
FY 2002														101	101	101	6								† ¢
FY 2003																	;								ř
Remarks:																									

	INDIVIDUAL MODIFICATION	Date	February 1997	
MODIFICATION TITLE:	Driver's Viewer Quick Release (DVQR) 1-92-05-4427			
MODELS OF SYSTEMS AFFECTED:	M1 = 0; $IPM1 = 0$; $M1A1 = 4351$ and $M1A2 = 181$	TOTAL RQMT = 4532ea		

DESCRIPTION / JUSTIFICATION:

vehicle precluding injury to the driver as well as damage to the periscope. Because of its potential importance in emergency driver provides a more positive locking feature which will preclude inadvertent release of the periscope from its operations position. Its main purpose is to prevent the DNV from falling into the driver's lap when it is moved out of the driver's way as he exits the The Driver's Viewer Quick Release is a modification to the Driver's Night Viewer [DNV] Periscope Hatch Retainer. It egress this modification has a secondary safety designation. It is however, primarily an operational improvement.

USER PRIORITY: 4g

DEVELOPMENT ST	DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		CONTRACTOR
Preli	Preliminary Design Review:	N/A	N/A
Critic	Critical Design Review:	4093	4093
Conf	Contractor Test and Evaluation:	V/A	N/A
Deve	Development Test and Evaluation:	1094	1094
Inital	Inital Operational Test and Evaluation:	V /Z	N/A
ВdI	IPR Production Decision	4093	4Q93
TDP	TDP Available:	2094	3Q94

					<u>Q</u>	VIDUAL	INDIVIDUAL MODIFICATION	CATIO	z						٦	Dato		Copyrig	Cohman 1007	
MODIFICATION TITLE (Cont):		۵	river's	Viewe	r Quic	k Rele	Driver's Viewer Quick Release (DVQR) 1-92-05-4427	VQR)	1-92-0	5-445	7							B I I I	1881	
FINANCIAL PLAN: (\$ in Millions)	FY 1996	966																		
	and Prior	Prior	FY 1997	266	FY 1998	86	FY 1999	6	FY 2000	 	FY 2001	150	FY 2002	72	FY 2003	1 20	TC		TOTAL	Ā
L S F	ð	₽	ਣੇ	\$	δ	€5	ð	€9	ξ	\$	हे	8	Δţ	€9	δ	8	Q (\$	Qty	€9
PROCUREMENT											,						***************************************		-	
Kit Quantity	1505		1027		1000		1000												4532	
Installation Kits																				
Installation Kits Nonrecurring		0		,		,														
Equipment Nonrecurring		O.		- -				0. -		,										0.5
Engineering Change Orders	•														-					
Data					-		·									· ·				
Training Equipment																				
Support Equipment								_												
Other										,										
Interim Contractor Support							•													
													1		-					
Installation of Hardware																				
FY 1996 & Prior Egpt - 1505	785	0.1	720	0															i v	ć
FY 1997 Eqpt Kits 1027					1027	0.2													2007	2 0
		-					1000	0.2											1000	òò
FY 1999 Eqpt Kits 1000									1000	0.2						-			1000	0.2
FY 2000 Eqpt kits																				
FY 2001 Eqpt kits			***					_												
FY 2002 Eqpt kits								-												
FY 2003 Eqpt kits																	-			
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	785	0.1	720	0.1	1027	0.2	1000	0.2	1000	0.2	-	\vdash		-	-	-	-		4532	0.8
Total Procurement Cost	1	0.3		0.2		0.3		0.3	H	0.2	H	H								1.3
METHOD OF IMPLEMENTATION: Depot Field Teams Contract Dates:	Depot F	Field Tea FY 1997:			DMINIS	TRATIV F)	ADMINISTRATIVE LEADTIME: 96 FY 1998:	TIME:	2 0CT	0,	Months 37	<u> </u>	PRODUCTION LEADTIME: FY 1999:	TION LI	EADTIM	₩.	3 Mo	Months		
Delivery Date:	L	FY 1997:		DEC 96	~	Ĺ	FY 1998:		DEC			Ĺ	FY 1999:		DEC					

Installation Schedule:		iver's	Driver's Viewer Quick Release (DVQR)	ır Qui	S S S	lease	(DVG		1-92-05-4427	4427						Date	•		Februa	February 1997					
	FY 1996		FY 1997	266			FY 1998	86		-	FY 1999	ඉ		_	FY 2000	0			FY 2001	_					
	& Prior	-	01	co)	4	- i	01	න	41	-1	QI	(A)	41		2	m m	41	., -	OI.		41				Total
Inputs																					1				
FY 1996 & Prior	1505																								1505
FY 1997		250	250	250	250	27																			1027
FY 1998						223	250	250	250	27															1000
FY 1999										223	250 2	250 2	250	27											1000
Outputs																									
FY 1996 & Prior	785	180	180	98	180																				1505
FY 1997						257	257	257	256																1027
FY 1998										250 2	250 2	250 2	250												1000
FY 1999														250 2	250 2	250 2	250								1000
																									2
		_	FY 2000	_		II.	FY 2001			7	FY 2002			Ŧ	FY 2003			Ŧ	FY 2004			귤	FY 2005		
		-	8	က	4	-	8	က	4	-	8	က	4	-	8	က	4	-	8	က	4	-	8	ဗ	4 Total
Inputs	•																								
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Remarks:																				<u> </u>					
** Less than \$0.1M.	۸.																								

	INDIVIDUAL MODIFICATION Date	February 1997
MODIFICATION TITLE:	Pulse Jet Air System (PJAS) 1-92-05-4475	
MODELS OF SYSTEMS AFFECTED:	M1 = 0; IPM1 = 0; M1A1 = 4351; and M1A2 = 228 TOTAL RQMT = 4579ea	
DESCRIPTION / JUSTIFICATION:		

current system requires frequent servicing in such an environment which can introduce dust into the engine as the integrity of the clean air path is The PJAS modification extends the time between required service to the air filtration system of Abrams tanks in a severe dust environment. The broken during servicing. PJAS will greatly reduce the frequency of such servicing, thus improving combat performance and reducing O&S costs. PJAS was identified as user priority Number One by Abrams Tank units involved in ODS (Operation Desert Storm).

USER PRIORITY: 5

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		
Preliminary Design Review:	PLANNED 2Q92	ACCOMPLISHED 2Q92
Critical Design Review:	3092	3092
Contractor Test and Evaluation:	3093	3093
Development Test and Evaluation:	3093	3093
Inital Operational Test and Evaluation:	4093	4093
IPR Production Decision	4093	4Q93
TDP Available:	20,96	2096

Modification	
Exhibit P-3a Individual	
w	

					QN	VIDUAL	MODIF	INDIVIDUAL MODIFICATION								Date		Febru	February 1997	
MODIFICATION TITLE (Cont):		ا ھ	ulse J∢	et Air (Systen	(PJA	S) 1-92	Pulse Jet Air System (PJAS) 1-92-05-4475	175											
FINANCIAL PLAN: (\$ in Millions)	7. A	Į.																		
	and Prior	e je	FY 1997	997	FY 1998	966	FY 1999	66	FY 2000	- 2	FY 2001	15	FY 2002	02	FY 2003	303	10	C	TOTAL	AL.
	ð	€9	ģ	æ	ĝ	69	δį	\$	ğ	\$	È	65	ð	9	ŧ	69	λŧσ	\$	δ	₩
RDT&E																				
PROCUREMENT																				
Kit Quantity	492		144		24		62		62		124		124		124		3423		4579	
Installation Kits															- 144-					
Installation Kits Nonrecurring																				
Equipment		12.4		7.1		1.0		2.8		3.0		2.7		5.8		5.8		213.8		257.4
Equipment Nonrecurring		0.8																		0.8
Engineering Change Orders		2.1					-													2.1
Testing		9.1				-	**************************************													1.6
Training Equipment																				
Support Equipment											•									
Other [In / House Spt]		6.	-	0.1																1.4
Interim Contractor Support		-																		
										•					_					
Installation of Hardware																				
FY 1996 & Prior Eqpt - 492	_		277	2.3	100	9.0	24	0.2	82	9.0	88	0.2							492	4.1
FY 1997 Eqpt Kits 144											34	0.4	110	1.0					144	1.4
FY 1998 Eqpt Kits 24													41	0.1	9	0.1			24	0.2
FY 1999 Eqpt Kits 62															82	9.0			62	9.0
FY 2000 Eqpt kits 62															25	0.5	9	0.1	62	9.0
FY 2001 Eqpt kits 124					***************************************												124	1.2	124	1.2
FY 2002 Eqpt kits 124				-													124	1.2	124	1.2
FY 2003 Eqpt kits 124																	124	1.2		1.2
(FY(TC) Eqpt (xx kits) 3423																	3423	42.4	3423	42.4
Total Installation Cost	-		277	2.3	100	0.8	24	0.2	62	9.0	62	9.0	124	1.1	124	1.2	3805	46.1	4579	52.9
Total Procurement Cost		18.2		9.5		1.8		3.0	$\left - \right $	3.6		6.3		6.9		7.0		259.9		316.2
	2	20,000	, 10 20 20 20 20 20 20 20 20 20 20 20 20 20			TOAT	A DMINISTO ATIVE I EADTIME:	TIME.		Ž.	Months	٥	- ANTANA I MOITOI I GODO	, NOIT	1 V	Ú	Ŧ	Months		
Contract Dates: FY 1997;	- 60 E	FY 1997:	7:	S	88	<u>.</u>	FY 1998:	<u>.</u>	₹	0)	2	. Œ	FY 1999:		, , , ,	JUN 99		2		
Delivery Date:	-	FY 1997:	7.	MAY	66	<u>-</u>	FY 1998:		Ž	MAY 99		ட	FY 1999:	_	Ž	MAY 99				

		1	;) Joseph	コンニ	5	7-72-	1 died det All System (PJAS) 1-82-05-44/5	_								Date		Feb	February 1997	7			
ıL	FY 1996		FY 1997	260			FY 1998	398			FY 1999	8			FY 2000	8			FY 2001	01				
	& Prior	-	OI	(C)	41	+1	O.	m	41		CII	ෆ	41	-	CI	က	4		0	m	4		J.	T.
Inputs												ı	Ì	l	ı	1	1	1	ı	ì	1		4	7
FY 1996 & Prior	99	20	20	20	20	35	35	35	32	35	35	16												•
FV 1997								})	}	}	2 ;		ļ										492
												9	36	36	36	9								144
FY 1998																54							•	24
FY 1999																8	36	54						62
Outputs																								
FY 1996 & Prior	-	2	2	20	29	16	16	16	16	15	15	15	15	16	16	15	5	16	12					492
FY 1997																			4	15	15		110	144
FY 1998																							24	24
FY 1999																							63	00
																							70	-
		Ĺ	FY 2000			ш	FY 2001			Ţ	FY 2002			Ţ	FY 2003			ш	FY 2004					
		-	8	က	4	-	8	က	4	-	8	က	4	-	8	က	4	-	2	ო	4	•	T.C	Total
Inputs)	4
FY 2000																							62	69
FY 2001																							, ,	,
FY 2002																							+ 21	124
EV 2002																							124	+2
5003																							124	124
4																						n	3423	3423
Sindin																								
FY 2000													٠										62	62
FY 2001																							124	124
FY 2002																							124	124
FY 2003																						n	3547 *	3547
Remarks:	<u> </u>	Includes FY04 & out "To Complete" Quantity	EVOA	410	T,	market	Č	Jih.																

	A A STATE OF THE S		
	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	Mounted Water Ration Heater (MWRH) 1-92-05-4426		
MODELS OF SYSTEMS AFFECTED:	M1 = 0; IPM1 = 0; M1A1 = 1501 and M1A2 = 1079	TOTAL RQMT = 2580ea	

DESCRIPTION / JUSTIFICATION:

The purpose of the Mounted Water Ration Heater [MWRH] is to provide the Abrams Tank crew with the internal capability to heat water and rations during extended field operations without having to exit from the protection of the vehicle.

NOTE: ATCOM / PM SOLDIER have procured the MWRH. Abrams Tank funds listed here - in are for the integration kit and installation only.

USER PRIORITY: ap10

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		
	PLANNED	ACCOMPLISHED
Preliminary Design Review:	4092	4092
Critical Design Review:	1093	1093
Contractor Test and Evaluation:	1093	1093
Development Test and Evaluation:	3Q93	3Q93
Inital Operational Test and Evaluation:	3093	3Q93
IPR Production Decision	2Q95	4095
TDP Available:	3Q96	3Q96

					=	DIVID	JAL MC	INDIVIDUAL MODIFICATION	TION							Date		Fabrus	February 1997	
MODIFICATION TITLE (Cont);		2	Aounte	ed Wa	ter Ra	tion F	leater	Mounted Water Ration Heater (MWRH) 1-92-05-4426	₹H) 1-6	2-02-7	1426									
FINANCIAL PLAN: (\$ in Millions)	FY 1996	966	_																	
	and Prior	Prior	삺	FY 1997	된	FY 1998		FY 1999	FY	FY 2000	E	FY 2001	FY;	FY 2002	FY 2003	003	TC	0	TOTAL	Ā
	ğ	ક્ક	ਰੇ	ક્ક	ð	\$	ğ	\$	ਰੇ	&	ð	\$	ĝ	89	ĝ	\$	δ	69	è	છ
RDT&E							_	<u> </u>												
PROCUREMENT	•							n.												
Kit Quantity	1501																1079		2580	
Installation Kits		1.8																5.)))	6
Installation Kits Nonrecurring																		?)
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data		-																***		
Training Equipment																				
Support Equipment			_																	
Other III / House Support		0																		ď
Interim Contractor Support		5																		0.1
:																				
Installation of Hardware																				
FY 1996 & Prior Eqpt - 1501	0		750	0.2	751	0.2	01												1501	0.4
FY 1997 Eqpt Kits								_			_									
FY 1998 Eqpt Kits	-																		-	
FY 1999 Eqpt Kits																				
FY 2000 Eqpt kits	•																			
FY 2001 Eqpt kits																	·····			
FY 2002 Eqpt kits														•						
FY 2003 Eqpt kits																				
(FY(TC) Eqpt (xx kits) 1079																	1079	C	1079	0.9
Total Installation Cost			750	0.2	751	0.2											1079	0.3	2580	0.7
Total Procurement Cost		1.9		0.2		0.2												1,8		4.1
METHOD OF IMPLEMENTATION: Unit Maint,/Depot Team Contract Dates:	Unit Ma	aint./Depo	oot Teal	E	ADMIN	ISTRA	TIVE LI	ADMINISTRATIVE LEADTIME:	ü	က	Months		PRODU	CTION	PRODUCTION LEADTIME:	ME	<u>გ</u>	Months		
Delivery Date:	- u	FY 1997:	٠.				FY 1998:						FY 1999: FY 1999:	¥ ÷						

Installation Schedule:		onnte	d Wa	ter R	ation	Mounted Water Ration Heater (MWRH) 1	r M	EH.	-92-C	-92-05-4426	9					^	Date		Febru	February 1997	_	:			
	FY 1996		Ŧ	FY 1997			<u>.</u>	FY 1998			FY 1999	666			FY 2000				FY 2001	2					
	& Prior	- i	αı	Ŋ	41	-	αı	Ю	41	-	αı	ଠା	41	₩	αı	න	41	-	0 1	_(C)	41				Total
Inputs																									
FY 1996 & Prior	17	210	210	210	210	210	210	210	4																1501
FY 1997																									
FY 1998																									
FY 1999					•																				
Outputs																									
FY 1996 & Prior		188	188	187	187	188	188	188	187																1501
FY 1997																									
FY 1998																									
FY 1999																									
			FY 2000	8			FY 2001	. =		_	FY 2002	8		L	FY 2003			ш	FY 2004			FY	FY 2005		
		-	2	က	4	-	2	က	4	-	8	က	4	-	8	က	4	_	8	ဗ	4	-	8	ဗ	4 Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
į																									
Outputs												•													
FY 2000																									
FY 2001						•																			
FY 2002																									
FY 2003																									
Remarks:																									
Installation Less Than \$0.1M.	ian \$0.1M																								

	INDIVIDUAL MODIFICATION Date February 1997	Γ
MODIFICATION TITLE: Prior Year MOD	Kit Applications N/A	Τ
MODELS OF SYSTEMS AFFECTED: M1 = 355; IPM	55; IPM1 = 892; M1A1 = 4351 and M1A2 = 1079	
DESCRIPTION / HISTIFICATION.		
Continuing effort to install / apply modification executed within O&MA [P7M].	dification kits procured during or before FY90. This effort was previously budgeted and	
USER PRIORITY: ap1 through ap24 [Less	· [Less ap2, ap7, ap8, ap10 and ap 12]	

	PLANNED ACCOMPLISHED N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A A/A
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	Preliminary Design Review:	Critical Design Review:	Contractor Test and Evaluation:	Development Test and Evaluation:	Inital Operational Test and Evaluation:	IPR Production Decision	TDP Available:

					N.	IVIDUA	L MOD	INDIVIDUAL MODIFICATION	NO						°	Date		Februa	February 1997	
MODIFICATION TITLE (Cont):		Д	rior Ye	ar MC	Prior Year MOD Kit Applications N/A	Applic	ations	N/A												
FINANCIAL PLAN: (\$ in Millions)															; ;					
	and Prior	rior	¥	FY 1997	FY 1998	866	Ε¥	FY 1999	FY 2000	000	FY 2001	100	FY 2002	8	FY 2003	23	Į		TOTAL	Į.
	ð	€5	र्हे	€>	ð	8	ŧ	69	È	8	è	9	ð	49	Ì ĕ	+	¦} ĕ	65	2 €	بھ ال
RDT&E																-				
PROCUREMENT																				
Kit Quantity	6847																		6847	
Installation Kits																				
Installation Kits Nonrecurring							_			-						 -				
Equipment																				
Equipment Nonrecurring									-						•					
Engineering Change Orders															 -					
Data					-															
Training Equipment															-					
Support Equipment																	-			
Other				7.																
Interim Contractor Support																				
									•											
Installation of Hardware																				
FY 1996 & Prior Eqpt - 6847	6408	65.0	439	2.4											•				6847	67.4
FY 1997 Eqpt Kits																			;	
FY 1998 Eqpt Kits						•														
FY 1999 Eqpt Kits					-															
FY 2000 Eqpt kits														`	_	_				
FY 2001 Eqpt kits																				
FY 2002 Eqpt kits										-										
FY 2003 Eqpt kits																				
(FY(TC) Eqpt (xx kits)																			***	
Total Installation Cost	6408	65.0	439	2.4						-						-	T		6847	67.4
Total Procurement Cost		65.0		2.4												_	-			67.4
METHOD OF IMPLEMENTATION: Depot Teams	I: Depot T	eams			ADMINI	STRAT	VE LE/	ADMINISTRATIVE LEADTIME:	••	N/A Months	Aonths	_	PRODUCTION LEADTIME:	TION	EADTII		N/A Months	fonths		
Contract Dates:		FY 1997:	٠.				FY 1998:					_	FY 1999:							
Delivery Date:	ш.	FY 1997:					FY 1998:						FY 1999:							

Installation Schedule:		ior Ye	Prior Year MOD Kit Applications N/A	ا ج لا	4 App	licatio	N SE									'									İ	
	9	· :			1		2										Date		90	reordary 1997	_					
	FY 1996		FY 1997	997			FY 1998	866			FY 1999	666			FY 2000	8			FY 2001	10						
	& Prior	ᅱ	CNI	ကျ	41	-1	Οŧ	က	41	+1	Q I	(C)	41	-	QI	ෆ	4	*	O.	ო	4					Total Etal
Inputs																i	i	!	1	1	i					N N
FY 1996 & Prior	6847																									1
FY 1997																										064/
FY 1998																										
FY 1999																										
Outputs																										
FY 1996 & Prior	6408	147	146	146																						
FY 1997																										684/
FY 1998																										
FY 1999																										
		_	FY 2000			_	FY 2001	_		ų.	FY 2002	C 1		ũ	FY 2003			Ų	EV 2004			Ĺ	ביטטני עם			
		-	8	က	4	-	8	က	4	-	0	က	4	-	8	ო	4	· -		œ	4	•		ď	~	Loto L
Inputs															l	ı			ı	•	•	-	ı	•		i cia
FY 2000							•																			
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FY 2002																										
FY 2003																										
Outputs																										
FY 2000																										
FY 2001																										
FY 2002																										
FY 2003																										
Remarks:																										
																										•



INDIVIDUAL MODIFICATION Date February 1997	1997
MODIFICATION TITLE: 2nd Gen Forward Looking Infra-Red (2GFLIR) 1-96-05-4504	
MODELS OF SYSTEMS AFFECTED: M1 = 0; IPM1 = 0; M1A2 = 617	
DESCRIPTION / JUSTIFICATION:	
2nd Generation Forward Looking Infra - red [2G FLIR] is a component based improvement to the M1A2 Commander's Independent Thermal Viewer [CITV] and Thermal Imaging System [TIS] which is designed to significantly increase the capabilities of these subsystems. The new capabilities will greatly improve the tank crew's ability to detect, recognize and identify potential targets during the	dent e sub - ing the
day, night or through smoke, rog or other battlened obscurants.	
USER PRIORITY # 3	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	
Critical Design Review:	
Contractor Test and Evaluation:	
Development Test and Evaluation:	
Inital Operational Test and Evaluation:	
IPR Production Decision	
TDP Available:	





Installation Schedule:	le: 2nd Gen Forward Looking Infra-Red (2GFLIR) 1-96-05-4504	-96-05-4504 EV 1999	900		ú	EV 2000	Date		February EV 2001	February 1997			
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Inputs													
FY 1996 & Prior													
FY 1997													
FY 1998													
FY 1999													
Outputs													
FY 1996 & Prior													
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FY 1998													
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	FY 2000 FY 2001	FY 2002	Q		FY 2003	003		щ	FY 2004				
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Inputs													
FY 2000	O.												Ø
FY 2001	4	6 10	10	9									36
FY 2002				œ	18	18 18							64
FY 2003							91	58	28	28		415	515
Outputs													
FY 2000	-												8
FY 2001		6 6	6	6									36
FY 2002					16	16 16	16						64
FY 2003								22	52	25	25	415 *	515
Remarks:	Includes FY05 & Out qty"s												
										ł			

	INDIVIDUAL MODIFICATION	Date	February 1997	Г
MODIFICATION TITLE:	System Enhancement Package (SEP) 1-96-05-4505			T-
MODELS OF SYSTEMS AFFECTED:	M1 = 0; IPM1 = 0; M1A1 = 0; M1A2 = 617			T'''
DESCRIPTION / JUSTIFICATION:				_
i				-

The System Enhancemetn Package [SEP] consists of M1A2 Hardware & Software changes which support the US Army's Digitization partitioning necessary for the M1A2 to operate in the Army's common operating environment. The upgrade also provides the future growth without significant changes to the vehicle architecture allowing for insertion of technology forecast to mature through 2003. These changes are designed to be exportable to other Abrams platforms, meet Army requirements for joint interoperability with Combined Arms Command and Control Systems and maximize compatibility / commonality with other Ground Combat Systems. of the Battlefield effort. This effort upgrades the M1A2 electronics with improved processors, increased memory and Software

DEVELOPMENT OTATIO 1994 TO DEVELO 1994 TO 1994			
DEVELOPMENT STATUS / MAJOH DEVELOPMENT MILESTONES: Fxamples			
Preliminary Design Review:	3Q96	ACCOMPLISHED 3Q96	
Critical Design Review:	1097	1097	
Contractor Test and Evaluation:	2097		
Development Test and Evaluation:	4097		
Inital Operational Test and Evaluation:	2098		
IPR Production Decision	3038		
TDP Available:	4Q98		

					<u>N</u>	VIDUAL	MODIF	INDIVIDUAL MODIFICATION	Z						ă	Date		Februa	February 1997	
MODIFICATION TITLE (Cont):		Sy	System Enhan	Enhar	ceme	nt Pac	kage ((SEP)	1-96-0	cement Package (SEP) 1-96-05-4505										
FINANCIAL PLAN: (\$ in Millions)	FY 1996	وا																		
	and Prior	ا ق	FY 1997	797	FY 1998	86	FY 1999	666	FY 2000	00	FY 2001	5	FY 2002	\vdash	FY 2003	 -	10		10	TOTAL
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RDT&E					-															
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Installation Kits									4		3		5		3		}		20	
installation Kits Nonrecurring											-,									
Equipment										1.2		19.7		35.8		47.6		254.1		358.4
Equipment Nonrecurring				-																
Engineering Change Orders														-						
Data											•									
Training Equipment										-	-									
Support Equipment			•												. -					
Other																- 4-				
Interim Contractor Support		-																		
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Installation of Hardware														•						
FY 1996 & Prior Eapt Kits			•				-		<u>_</u>	-				_						
FY 1997 Eqpt Kits													,							
FY 1998 Eqpt Kits							-				·									
FY 1999 Eqpt Kits				-											·			-		
FY 2000 Eqpt Kits							_									-		,		
FY 2001 Eqpt Kits																				
FY 2002 Eqpt Kits										_										
FY 2003 Eqpt Kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost				П												-				
Total Procurement Cost						\dashv				1.2	\vdash	19.7	H	35.8		47.6		254.1		358.4
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Contract Dates:		Contracto FY 1997:				<u> </u>	IVE LEAL FY 1998:			Š	Months	ΣÚ	PRODUCTION LEADTIME: FY 1999:	2 2 2 1	EAUI	ij	2	Months		
Delivery Date:	` ₹	FY 1997:				. ш	FY 1998:					. íL	FY 1999:							
<u> </u>																				

	FY 1996	96 FV 1997 EV 1998	700																			
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7 2003															-	16 2	78	28	58		415	515
Outputs																						
FY 2000							-	-														- Ci
FY 2001									6	6	6	6				,						36
FY 2002												-	16 1	16 1	16 10	16						64
FY 2003																W	52	22	25	25	415 •	515
Remarks:	*	Includes FY05 & Out qty's	FY05	& Out	s,4tb													l				

	INDIVIDUAL MODIFICATION	Date	(e February 1997
MODIFICATION TITLE:	Embedded Battle Command 1-96-05-4516		
MODELS OF SYSTEMS AFFECTED:	M1 = 0; $IPM1 = 0$; $M1A1 = 0$; $M1A2 = 1079$		
DESCRIPTION / JUSTIFICATION:			
Embedded Battle Command [EBC] is a part fielded M1A2 tank. There is no hardware as Up - to - Date and identical computer sfoftware	Embedded Battle Command [EBC] is a part of Horizontal Battlefield Digitization [HBD]. It is an annual software "Drop" into each fielded M1A2 tank. There is no hardware associated with this modification. The purpose of HBD is to assure that all M1A2's have Up - to - Date and identical computer sfoftware with the latest State - of - the - Art changes installed on a regular basis.	on [HBD]. It is an annual The purpose of HBD is to rt changes installed on a re	I software "Drop" into each assure that all M1A2's have gular basis.
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		COV	
Examples Preliminary Design Review:			ACCOMPLISHED
Critical Design Review:		3097	
Contractor Test and Evaluation:	ion:	4097	
Development Test and Evaluation:	uation:	2098	
Inital Operational Test and Evaluation:	evaluation:	3098	
IPR Production Decision		4098	
TDP Avallable:		2099	



Installation Schedule:	ł	papp	Battle	Com	mand	Embedded Battle Command 1-96-05-4516	15-45	9							Date			February 1997	1997					
	FY 1996	Ĺ	FY 1997			₹	FY 1998			FY 1999	66		_	FY 2000	_		Ĺ	FY 2001						
	& Prior 1	01	(C)	4	-	C)I	ന	41	- ⊣	OI.	ଚ	41	-	23	41	+-1	C I	Ю	4 1					Total
Inputs																								
FY 1996 & Prior																								
FY 1997																								
FY 1998																								
FY 1999																								
Outputs																								
FY 1996 & Prior																								
FY 1997																								
FY 1998																								
FY 1999																								
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		FΥ				FY 2001		•	ш.	FY 2002		•	<u>.</u>	FY 2003			FY 2004				FY 2005			
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Inputs																								
FY 2000																								
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FY 2002																								•
FY 2003																								
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ounding.																								
FY 2000																								
FY 2001																								
FY 2002																								
FY 2003																								
Remarks:	There is no Delivery or Installation schedule in the	Delive	ery or	Installa	tion sch	edule in	_	normal sense of the terms.	ense of	f the te		Every F	peplei	Every Fielded M1A2 will have its computers "upgraded" every year.	ill have	its co	mputer	s "upgr	aded" e	every ye	ear.			

	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	External Auxiliary Power Unit (EAPU) 1-85-05-4057		
MODELS OF SYSTEMS AFFECTED:	M1 = 0 ea., IPM1 = 0 ea., M1A1 = 1500 ea., M1A2 = 0 ea., Total = 1500 ea.		
DESCRIPTION / JUSTIFICATION:			

The current use of the Abrams Tank during stationary Tank night defensive positions, or Silent Watch Mode requires frequent, long duration idling greatly reduced fuel usage, and without main engine wear. The External Auxiliary Power Unit (EAPU) continuously delivers 2 KW of power at 28 Volts DC. It will be mounted in the left side of the turret bustle rack and will be fully integrated with the tank electrical system. The EAPU has its of the AGT-1500 main vehicle engine in order that electricity be available. This modification will provide power for electrical requirements at own fuel supply and can provide power for 10 to 12 hours on one tank-full of diesel fuel.

	ACCOMPLISHED								
	_			•	•	*	•	*	
	PLANNED	* A/N	V	Α	۷ ۲	۷ ۷	N / A	A/N	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	Examples	Preliminary Design Review:	Critical Design Review:	Contractor Test and Evaluation:	Development Test and Evaluation:	Inital Operational Test and Evaluation:	IPR Production Decision	TDP Available:	

Exhibit P-3a Individual Modification

				2	IVIDUA	L MODIF	INDIVIDUAL MODIFICATION	_						Date	٩		February 1997	, 1997	Γ
MODIFICATION TITLE (Cont):	ш	External Auxil	l Auxil		wer L	Jnit (E/	iary Power Unit (EAPU) 1-85-05-4057	-85-05	-4057				.						
FINANCIAL PLAN: (\$ in Millions)	FV 1998																		
	and Prior	£	FY 1997	FY 1998	866	FY 1999	660	FY 2000	<u>8</u>	FY 2001	=	FY 2002	22	FY 2003	13	7		TOTAL	1
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RDT&E										-	-	<u> </u>	-	-	-		_		
PROCUREMENT																			
Kit Quantity		336	_													1164		1500	
Installation Kits																	·. .		
Installation Kits Nonrecurring																			
Equipment			11.0														44.4	_	55.4
Equipment Nonrecurring			_													-			
Engineering Change Orders																			
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Training Equipment																			
Support Equipment	-																		
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<u>!</u>										_								-	
FY 1997 Eqpt Kits 336				336	2.1													336	2.1
FY 1998 Eqpt Kits																			
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FY 2000 Eqpt Kits						<u> </u>													
FY 2001 Eqpt Kits										•									
FY 2002 Eqpt Kits					•														
FY 2003 Eqpt Kits																			
(FY(TC) Eqpt (xx kits) 1164															·-	1164	9.8	1164	8.6
Total Installation Cost				336	2.1											1164	9.8	1500	10.7
Total Procurement Cost			11.0		2.1												53.0		66.1
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Contract Dates:	FY 1997:		6) 		FY 1998:	<u>.</u>		Ě		Ĺ	7 1999.		200		Ē	SILIDIA		
Delivery Date:	FY 1997:			86		FY 1998:					. ú	FY 1999:							•

Installation Schedule: Exter	External Auxiliary Power Unit (EAPU) 1-85-05-4057	Unit (EAP	U) 1-8	3-05-4()57					Date			February 1997	1997				
FY 1996	FY 1997	Ē	FY 1998			FY 1999			FY 2000			ш.	FY 2001					
& Prior 1	. 2 . 2 . 23	1 2	g	41	1 2	ଠା	41		NI.		4	2	က	4				Total
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FY 1998																		5
FY 1999																		
4																		
Carpais																		
FY 1996 & Prior																		
FY 1997		110	112	114														336
FY 1998			•															•
FY 1999																		
	FY 2000	FY 2001	=		FY 2002	2002		ш	FY 2003			FY.	FY 2004		_	FY 2005		
	1 2 3 4	- 2	ဗ	4	-	2 3	4	-	8	က	4		8	3 4	-	2	ဗ	4 Total
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FY 2000																		
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FY 2002																		
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FY 2000																		
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	INDIVIDUAL MODIFICATION		Date February 1997	Γ
MODIFICATION TITLE:	External Auxiliary Power Unit (EAPU) Upgrade TBD2	2		
MODELS OF SYSTEMS AFFECTED:	M1 = 0; $IPM1 = 0$; $M1A1 = 1500$; $M1A2 = 0$			
DESCRIPTION / JUSTIFICATION:				
This modification is the Upgrade of 1500ea lupgrade will replace the 12 volt Starter with receptacle and remove the 24 volt Battery.	ade of 1500ea External Auxiliary Power Units (EAPU's) originally procurred / fielded in FY91 / 93. volt Starter with a 24 volt starter; add an improved voltage regulator; add a NATO 4.4 volt Battery. These changes will increase the reliability and durability of the existing EAPU's.	APU's) originally procured voltage regulator; reliability and durability	rred / fielded in FY91 / 93. The add a NATO y of the existing EAPU's.	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES				
examples Preliminary Design Review:		3Q95	ACCOMPLISHED 3Q95	
Critical Design Review:		1096	1096	
Contractor Test and Evaluation:	ation:	2096	2096	
Development Test and Evaluation:	aluation:	V Z	V /V	
Inital Operational Test and Evaluation:	Evaluation:	4Q96	4096	
IPR Production Decision		4096	4096	
TDP Available:		2097		
	`			
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		l		Z	DIVID	AL MO	INDIVIDUAL MODIFICATION	NO O					:	Date		A67	February 1007	
MODIFICATION TITLE (Cont):		External Auxil	al Aux		ower	Chit	ary Power Unit (EAPU) Upgrade TBD2	Upgra	de TBI	22							1661 (mp)	
FINANCIAL PLAN: (\$ in Millions)	7 7 7 7 7	 																
	and Prior	Ā	FY 1997	FY	FY 1998	占	FY 1999	FY 2000	80	FY 2001	10	FY 2002		FY 2003	-	i L	-	TOTAL
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RDT&E					L							+	╁		╁	}		
PROCUREMENT																		
Kit Quantity												N						
Installation Kits																		
Installation Kits Nonrecurring										•								
Equipment		·-																
Equipment Nonrecurring													-			_		
Engineering Change Orders																		
Data																		
Training Equipment																_		
Support Equipment																		
Upgrade existing Modification		1500	2.5														1500	25
Interim Contractor Support													-				-	
											, .							
Installation of Hardware								,				<u>-</u>						
FY 1996 & Prior Eapt Kits																		
EY 1997 Eant Kits 1500				1500	:													
				2													0061	
FY 1999 Enpt Kits																		
FY 2000 Egpt Kits	-																	
FY 2001 Eqpt Kits											••-	··-						
FY 2002 Eqpt Kits																		
FY 2003 Eqpt Kits																		
(FY(TC) Eqpt (xx kits)																		
Total Installation Cost				1500				<u> </u>			-						1500	
Total Procurement Cost			2.5										<u> </u>					2.5
																		i
METHOD OF IMPLEMENTATION: Contractor Installation	Contractor In	ıstallatio		ADMIN	ISTRA	rive Le	ADMINISTRATIVE LEADTIME:		2	Months	ā	RODUCT	ION LE	PRODUCTION LEADTIME:	10	Months		
Contract Dates:	FY 1997:	2		97		FY 1998:	 				Ĺ.	FY 1999:						
Delivery Date:	FY 1997:	:,	APH	28		FY 1998:	.: 6:				Œ	FY 1999:						

Installation Schedule: Ex	External Auxiliary Power Unit (FAPU) Ungrade TBD2	ıxiliar	V Pov	/er Ur	ii (FA)	חותם	parac	e TBI	22					ŏ	Date		February 1997	ry 1997						
5	L	FY 1997			Ŧ	FY 1998)			FY 1999			FY 2000	000			FY 2001	_						
& Prior	1 2	ମ	41	∓ 1	OI.	(C)	41	-1	01	ଚା	4	-	01	ന്ദ	4	-	(X	m	4 1				2	Total
Inputs																								
FY 1996 & Prior																								
FY 1997						1500	_																	1500
FY 1998																								
FY 1999																	-							
Outputs EV 1996 & Prior							1500	_															4	1500
EV 1007																								
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FY 2000																								
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FY 2002																								
FY 2003						ļ																		
Remarks:	:	PR	IME C	ONTRA	PRIME CONTRACTOR WILL UPGRADE EACH EAPU ON SITE.	WILL (JPGR4	DE EA	VCH EA	PU ON	SITE.		DWAR	HARDWARE FOR THIS EFFORT IS READILY AVAILABLE.	THIS	EFFOR	R IS R	EADIL	LY AVA	NLABLE	,,;			
																								·

	1						DATE				
	m	BUDGET ITEM JUSTII	M JUSTIFIC	FICATION SHEET	타			Februa	February 1997		
APPROPRIATION / BUDGET ACTIVITY	IIVITY				P-1 ITEM NOMENCLATURE	LATURE					
PROCUREME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat V	OCMBT VEHS /Trac	cked Combat Vehicles	ø			•	ABRAMS UPGRADE PROGRAM (GA0750)	PROGRAM (GA075	(C)	
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	EV 2002	EV 2003	To Complete	Total Dragge
QUANTITY	206	100	120	120	120	120	26	30	2003	e complete	i Otal r logram
COST (in millions)	790.1	267.9	204.8	328.6	420.3	402.3	346.8	164.3	268.0	452.7	3645.8
Initial Spares (in millions)	4.3	16.0	9.3	13.9	10.1	10.3	11.3	18.8	19.1	35.0	148.2
Total (in millions)	794.4	284.0	214.1	342.6	430.4	412.6	358.1	183.1	287.0	487.7	3794.0
Unit Cost (in millions)	3.9	2.8	1.8	2.9	3.6	3,4	3.9	6.1	9 6	8 4	9.0
									2.0	0.0	0,0

Improved Commander's Weapon Station (ICWS), Position Navigation (POS/NAV) equipment, Radio Interface Unit (RIU), Core Architecture, D.U. Armor, DESCRIPTION: The Abrams Tank Upgrade Program supports the Department of Army vision for the future. The Upgrade Program will reconfigure M1 Tanks to the M1A2 configuration making it a more survivable and lethal tank. This includes the Commander's Independent Thermal Viewer (CITV), 120mm Gun, and Nuclear, Biological and Chemical (NBC) protection. In FY98 2nd Generation Forward Looking Infrared (FLIR) and vehicle core electronic upgrades will be cut into production.

JUSTIFICATION: The Upgrade Program will modernize the U.S. Army's armor force to enhance the combat effectiveness of the Abrams Tank Fleet and maintain the key elements of the tank industrial base.

PROGRAM SUMMARY

	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	TO COMPLETE	TOTAL PROG
Weapon Sys Cost Less Adv Proc PY Cur Year Prog Pius Adv Cur Year Total Cur Year	449.687 181.773 267.914 297.218 565.132	502.004 297.218 204.786 259.086 463.872	587.714 259.086 328.628 266.228 594.856	686.521 266.228 420.293 270.691 690.984	673.007 270.691 402.316 268.407 670.723	615.190 268.407 346.783 158.481 505.264	322.816 158.481 164.335 128.017 292.352	395.974 128.017 267.957 89.310 357.267	620.767 168.081 452.686 78.771 531.457	4853.680 1997.982 2855.698 1816.209 4671.907

	Γ	st		2697 335	2	274	7	13		36	9	1 0	. <u>1</u> 2	6								3	491 297		5721
TE February 1997		UnitCost	\$000	N																					us .
D. DATE Febru	FY 99	₽	Each	120	120	120	240	120	18720	09	120	2 5	120	120				•					240		120
ъ		TotalCost	\$000	323581 40185	2654	32840	1573	1579	5999 1496	2167	12036	682	629	1114	5959	60420	2552	870	6002	1259	643	12533	58958 71238	1050 29404	686521 266228 420293 270691 690984
C. MANUFACTURER NAME General Dynamics Land System (GN S)		UnitCost	\$000	2475 325	5 S	267	9	308		35	96	1 0	20	6				٠					1659		4898
	FY 98	ð	Each	120	7 70	120	240	120	18720	9	120	8 5	120	120						•		,	20 20		120
WEAPON ABRAMS UPGRADE PROGRAM (GA0750)		TotalCost	\$000	296947 39292	6921 2586	31996	1533	36970	5845 1458	2111	11726	665	625	1085	5835	43379	2499	852	5878	1233	630	12271	16586 20041	1059 28791	587714 259086 328628 266228 594856
N AS UPGRADE I		UnitCost	\$000	2421	3 2	260	9	328		34	95	1 0	. ro	6											4183
B. WEAPON ABRAMS	FY 97	ð	Each	120	120	120	240	120	18720	9	120	120	12 02	120											120
. APPN / BUDGET ACTIVITY TITLENO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vahirlas		TotalCost	\$000	290478 35227	2520	31183	1494	39302	5696	2057	11429	648	612	1058	5715	34393	2448	835	5757	1207	617	12019			502004 297218 204786 259086 463872
ET ACTIVITY TITLE/NO ENT OF WPNS & TRKD CN Tracked Combat Vehicles		UnitCost	\$000	2155 367	3 8	250	7	327		42	117	က်	ດເດ	10											4497
Tracked C	FY 96	ð	Each	5 8	000	8	200	9	15600	20	00	8 5	3 8	9											001
A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TR Tracked Combat Ve		TotalCost	\$000	29335	2333	25017	1382	32696	3338	2086	11701	540	499	570	4671	83732	2401	819	5646	1184	504	10417		·	449687 181773 267914 297218 565132
	₽	8		4																					
WTCV Cost Analysis	WTCV	Cost Elements			3. m/ IEO 4. Engine (DECU)	٠.	_	_	8. Track o Boad Wheels			12. Drivers Night Viewer	3. Basic Issue Irems 4. Mil STRIPS / BIK	5. VIS		7. Contract Engineering	IB. Project Management Admin Id. MATRIX Support		•		23. Testing 24. First Destination Transportation		26. II Gen FLIR (A Kit) FPD 102 27. II Gen FLIR (B Kit) FPD 101	8. STS C2 FPTA 9. ANAD	Weapon Sys Cost Less Adv Proc PY Cur Year Prog Plus Adv Cur Yr Tot Cur Year

	BUDGET PROCUREMENT HISTORY	•	AND PLANNING EXHIBIT (P-5A)					DATE		
B. APPROPRIATION / BUDGET ACTIVITY					C P.4 ITEM N	D.1 ITEM NOMENC! AT! IDE			rebidaly (397	6
PROCUREMENT C	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	Tracked Combat Vehicles				ABRAMS U	IENCLATURE ABRAMS UPGRADE PROGRAM (GA0750)	AM (GA07	(<u>)</u>	•
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD	CONTRACTED BY	AWARD DATE	DATE OF FIRST	ΔĚO	UNIT COST	SPECS AVAIL	EC EC	F YES W/A
1 Book Vohia		AND TYPE			DELIVERY	Each	\$000		REQ'D	
I. Basic Venicle FY 96	i di									.:
FV 97	GDLS/1	SS/FFP/M5(1)	TACOM-Warren	96-Inc	Oct-96	90	2155	Yes	2 2	
FY 98	GDLS/	SS/FFP/M5(2)	TACOM-Warren	Dec-96	Aug-97	120	2421	Yes	<u>ء</u>	
FY 99	GDLS/1	SS/FFP/M-5(4)	TACOM-Warren	Mar-99	Aug-98	120	2475	Yes	2 2	
				- INIAI - 22	Se for	0.71	/607	Sec	 2	
2. Armor /2										
FY 96	LITCO /4	SS/CPFF	DOE /3	Mar-95	Apr-96	80	367	× X	- e	
FY 97	LITCO /4	SS/CPFF	DOE /3	Mar-96	Feb-97	122	289	Ϋ́	¥ Z	
FY 98	LITCO/4	SS/CPFF	DOE /3	Dec-96	Feb-98	121	325	×	Y X	
FY 99	LITCO/4	SS/CPFF	DOE /3	Mar-98	Feb-99	120	335	A/A	¥ Z	
3. Hull/Turret Electronic Unit										
FY 96	GDLS/1	SS/FFP	TACOM-Warren/5	Anr.95	Anr-06	-00	ć	- 5		
FY 97	GDLS/1	C/FFP	TACOM-ACALA/6	May-96	Feb-97	240	62 30	SB >	2 2	
FY 98	GDLS/1	OPTION	TACOM-ACALA/6	Mar-97	Feb-98	220	3 6	Xes -	2 2	
						,			<u> </u>	
4. Engine (DECU)	į									
FV 97	AlliedSignal/	SS/FFP	TACOM-Warren	Feb-95	Apr-96	90	23	Yes	2	
00 / 1	Alliedosignal/	NOLLA	I ACOM-Warren	Mar-96	Feb-97	120	21	Yes	2	
06 - 1	AlliedSignal/	SS/FFP	TACOM-Warren	Mar-97	Feb-98	120	22	Yes	<u>۔</u>	
	AlliedSignal//	NOLLAO	TACOM-Warren	Mar-98	Feb-99	120	22	Yes	<u>-</u>	
REMARKS: 1. General Dynamics I and System Warran MI	Warren Mi					1			\dashv	T
' (i (luction									
J. Department of Energy Lockheed Idaho Technologies Company, Idaho Falls, Idaho	mpany, Idaho Falls, Idaho									
	ong Lead Material Contract.									-
7. AlliedSignal/Control & Accessories, Tucson A7	competitive contract.									
										<u> </u>





P-5A Procuren	History and Planning
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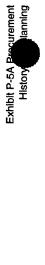
BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A) C. P. I. TERN COMPT HISTORY AND PLANNING EXHIBIT (P-5A) C. P. I. TERN COMPT HISTORY AND PLANNING EXHIBIT (P-5A) C. P. I. TERN COMPT HISTORY AND PLANNING EXHIBIT (P-5A) C. P. I. TERN COMPT HISTORY AND PLANNING EXHIBIT (P-5A) C. P. I. TERN COMPT HISTORY AND PLANNING EXHIBIT (P-5A) C. P. I. TERN COMPT HISTORY AND COMPT HISTOR	PROC	CUREMENT HISTOF	Y AND PLANNING	EXHIRIT (P-5A)					DATE		
PROCUREMENT OF WPNS & TRKO CMBT VEHS / 1 / Tracked Combat Vahides				/:> \ :\ :\ :\ :\ :\ :\ :\ :\ :\ :\ :\ :\ :					Fe	February 1997	26
The contract of the contract of the contract ment						C. P-1 ITEM NO	OMENCLATUR	۳			
TACOM-Warren CONTRACTOR AND LOCATION CONTRACT METHOD CONTRACTED BY AND TYPE CONTRACTOR AND LOCATION CONTRACT METHOD CONTRACT METHOD CONTRACT METHOD CONTRACT METHOD CONTRACT METHOD CONTRACT METHOD CONTRACT METHOD CONTRACT METHOD CONTRACT METHOD CONTRACT C		& TRKD CMBT VEHS / 1 / Tr	acked Combat Vehicles				ABRAMS U	ABRAMS UPGRADE PROGRAM (GA0750)	AM (GA07	.20)	
Authority		TRACTOR AND LOCATION	CONTRACT METHOD	CONTRACTED BY	AWARD DATE	DATE OF FIRST	αт	UNIT COST	SPECS AVAIL	SPEC IF REV	F YES W/A
Allison Trans/1			AND TYPE			DELIVERY	Each	\$000	MOM	RECID	
Allison Trans/1	ansmissions					00			;		
Allison Trans/1 SS/FFV/OP TACOM-Warren Dec-97 Feb-99		Trans/1	OPTION	TACOM-Warren	Apr-95	Apr-96	9	250	Xes	<u>۔</u> ک :	
Allison Trans/1 SS/FFP/CP TACOM-Warren Peb-98 TACOM-Warren Dec-97 Feb-99 TACOM-Warren Dec-97 Feb-99 TACOM-Warren Dec-97 Feb-99 TACOM-Warren Dec-97 Feb-99 TACOM-Warren Dec-97 Feb-99 TACOM-Warren Dec-97 Feb-99 TACOM-Warren Dec-97 Feb-99 TACOM-Warren Dec-97 Feb-99 TACOM-Warren Dec-97 Feb-99 TACOM-Warren Dec-97 TACOM-Warren		Trans/1	OPTION	TACOM-Warren	Dec-95	Feb-97	150	260	Yes	<u>2</u> :	
TACOM NICP		Trans/1	SS/FFP/CP	TACOM-Warren	Feb-97	Feb-98	120	267	Υes	2	
TACOM NICP		Trans/1	OPTION	TACOM-Warren	Dec-97	Feb-99	120	274	Yes	<u>-</u> ₽	
Accommode											
TACOM NICP Requisition TACOM-Warren Mar-95 Apr-96	nal Drives					•			;		
Loc Perf/2		M NICP	Requisition	TACOM-Warren	Mar-95	Apr-96	200	7	Yes	2	
Loc Perf/2		rf/2	C/FFP	TACOM-Warren	Nov-95	Feb-97	240	9	Yes	2	
Loc Perf/2 OPTION TACOM-Warren Mar-98 Feb-99		rt/2	OPTION	TACOM-Warren	Mar-97	Feb-98	240	9	Yes	ž	
Hughes/Various Various TACOM-ACALA Various Feb-97 Hughes/Various Hughes/Various Various TACOM-ACALA Various Feb-99 Various Hughes/Various Various TACOM-ACALA Various Feb-99 Various TACOM-ACALA Various Feb-99 Various TACOM-ACALA Various Feb-99 Various TACOM-Warren Feb-96 Goodyear Tire & Rubber/4 OPTION TACOM-Warren Nov-96 Feb-99 TBD OPTION TACOM-Warren Mar-98 Feb-99 Feb-99 TBD		rf/2	OPTION	TACOM-Warren	Mar-98	Feb-99	240	7	Yes	ž	
Hughes/Various Various TACOM-ACALA Various Hughes/Various Various TACOM-ACALA Various Hughes/Various Various TACOM-ACALA Various Feb-97 Various Hughes/Various Various TACOM-ACALA Various Feb-99 Various Goodyear Tire & Rubber/4 OPTION TACOM-Warren Mar-96 Feb-97 TBD OPTION TACOM-Warren Mar-98 Feb-99 Feb-											
Hughes/Various Various TACOM-ACALA Various Apr-96 Hughes/Various Various TACOM-ACALA Various Feb-97 Various Hughes/Various Various TACOM-ACALA Various Feb-99 Various TACOM-ACALA Various Feb-99 Various TACOM-ACALA Various Feb-99 Goodyear Tire & Rubber/4 OPTION TACOM-Warren Nar-96 Feb-97 TBD OPTION TACOM-Warren Nov-96 Feb-99 Feb-99 Feb-99 CAPED OPTION TACOM-Warren Nar-98 Feb-99 Feb-99 Feb-99 CAPED OPTION TACOM-Warren Nar-98 Feb-99 Feb-99 CAPED OPTION TACOM-Warren Nar-98 Feb-99 Feb-99 CAPED OPTION TACOM-Warren Nar-98 Feb-99 Feb-99 CAPED OPTION TACOM-Warren Nar-98 Feb-99 CAPED OPTION TACOM-WARREN NAR-98 Feb-99 CAPED OPTION TACOM-WARREN NAR-98 Feb-99 CAPED OPTION TACOM-WARREN NAR-98 Feb-99 CAPED OPTION TACOM-WARREN NAR-98 Feb-99 CAPED OPTION TACOM-WARREN NAR-98 Feb-99 CAPED OPTION TACOM-WARREN NAR-98 Feb-99 CAPED OPTION TACOM-WARREN NAR-98 Feb-99 CAPED OPTION TACOM-WARREN NAR-98 Feb-99 CAPED OPTION TACOM-WARREN NAR-98 FEB-99 CAPED OPTION TACOM-WARREN NAR-98 CAPED OPTION TACOM-WARREN NAR-98 FEB-99 CAPED OPTION TACOM-WARREN NAR-98 CAPED OPTION TACOM-WARREN NAR-98 CAPED OPTION TACOM-WARREN NAR-98 CAPED OPTION TACOM-WARREN NAR-98 CAPED OPTION TACOM-WARREN NAR-98 CAPED OPTION TACOM-WARREN NAR-98 C											
Hughes/Various		s/Various	Various	TACOM-ACALA	Varions	Apr-96	9	327	Yes	2	
ack Goodyear Tire & Rubber/4 C/FFP TACOM-Warren Various Feb-98 TBD C/FFP TACOM-Warren Nov-96 Feb-99 TBD OPTION TACOM-Warren Nov-96 Feb-97 TBD OPTION TACOM-Warren Nov-96 Feb-99		s/Various	Various	TACOM-ACALA	Varions	Feb-97	120	308	Yes	ž	
ack Goodyear Tire & Rubber/4 C/FFP TACOM-Warren Feb-96 Apr-96 TBD TBD OPTION TACOM-Warren Nov-96 Feb-97 TBD OPTION TACOM-Warren Nov-96 Feb-98 TBD OPTION TACOM-Warren Nov-96 Feb-99		s/Various	Various	TACOM-ACALA	Varions	Feb-98	120	13	Yes	g	
Goodyear Tire & Rubber/4 C/FFP TACOM-Warren Feb-96 Apr-96 Goodyear Tire & Rubber/4 OPTION TACOM-Warren Mar-96 Feb-97 TBD OPTION TACOM-Warren Nov-96 Feb-99 TBD		s/Various	Various	TACOM-ACALA	Various	Feb-99	120	13	Yes	2	
ack Goodyear Tire & Rubber/4 C/FFP TACOM-Warren Feb-96 Apr-96 Goodyear Tire & Rubber/4 OPTION TACOM-Warren Nov-96 Feb-97 TBD C/FFP TACOM-Warren Nov-96 Feb-98 TBD OPTION TACOM-Warren Mar-98 Feb-99								<u></u> -			
Goodyear Tire & Rubber/4						•					
Goodyear Tire & Rubber/4 OPTION TACOM-Warren Mar-96 Feb-97 TBD C/FFP TACOM-Warren Nov-96 Feb-98 TBD OPTION TACOM-Warren Mar-98 Feb-99		ear Tire & Rubber/4	C/FFP	TACOM-Warren	Feb-96	Apr-96	15600		Yes	ž	
TBD C/FFP TACOM-Warren Nov-96 Feb-98 TBD OPTION TACOM-Warren Mar-98 Feb-99		ear Tire & Rubber/4	OPTION	TACOM-Warren	Mar-96	Feb-97	18720		Yes	2	
TBD OPTION TACOM-Warren Mar-98 Feb-99			C/FFP	TACOM-Warren	Nov-96	Feb-98	18720		Yes	ž	
			OPTION	TACOM-Warren	Mar-98	Feb-99	18720		Yes	ž	
											
REMARKS:											

- Allison Transmission Div, GM Corp, Indianapolis, IN
 Loc Performance, Inc, Plymouth, MI
 Hughes Aircraft, El Segundo, CA
 Goodyear Tire & Rubber Co., Akron, OH

								DATE		Ī
	BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	ORY AND PLANNIN	G EXHIBIT (P-5A)						February 1997	
B. APPROPRIATION / BUDGET ACTIVITY					C. P-1 ITEM NOMENCLATURE	OMENCLATUR	7E			
PROCUREMENT O	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	Tracked Combat Vehicles				ABRAMS U	ABRAMS UPGRADE PROGRAM (GA0750)	AM (GA07	20)	
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD	CONTRACTED BY	AWARD DATE	DATE OF FIRST	σтν	UNIT COST	SPECS AVAIL	SPEC IF	IF YES W/A
		AND TYPE			DELIVERY	Each	\$000	MON	REQ'D	
9. Road Wheels					;					
FY 96		Requirement Cntr/FFP	TACOM-Warren	Dec-95	Apr-96	3200		Yes	은 운	
FY 97		Requirement Cntr/FFP	TACOM-Warren	Mar-96	Feb-97	3840		Yes	ટ	
FY 98		Requirement Cntr/FFP	TACOM-Warren	Dec-96	Feb-98	3840		Yes	2	
FY 99	B&C Corp/1	Requirement Cntr/FFP	TACOM-Warren	Mar-98	Feb-99	3840		Yes	2	
10. Gun Mounts/2										
FY 96	RIA	8	RIA	Jun-95	Apr-96	20	42	Yes	- S	
FY 97	RIA	W	RIA	Mar-96	Feb-97	9	34	Yes	2	
FY 98	RIA	WR	RIA	Mar-97	Feb-98	09	35	Yes	ž	
FY 99	RIA	WR	RIA	Mar-98	Feb-99	09	96	Yes	ž	
					-					
11. Gun										
FY 96	Watervllet	WR	Watervliet	Mar-95	Apr-96	100	117	Yes	g	
FY 97	Watervliet	WB	Watervliet	Apr-96	Feb-97	120	92	Yes	g	
FY 98	Watervliet	WR	Watervliet	Mar-97	Feb-98	120	86	Yes	ž	
FY 99	Watervliet	8	Watervliet	Mar-98	Feb-99	120	100	Yes	2 2	
12. Drivers Night Viewer										
FY 96	CECOM NICP	Requisition	CECOM	Jul-95	Apr-96	400	5	Yes	2	
FY 97	CECOM NICP	Requisition	CECOM	-	Feb-97	120	2	Yes	_S	
FY 98	TBD	TBO	CECOM	Jul-97	Feb-98	120	9	Yes		
FY 99	TBD	TBD	CECOM	96-Inc	Feb-99	120	9	Yes	ę S	
				•						

REMARKS:

B&C Corp, Barberton, OH
 RIA, Rock Island Arsenal, Rock Island, IL produces 50% of gun mounts.
 The remainder are procured with the GDLS contract.



C. P.1 ITEM NOMENCLATURE	BUDGET	BUDGET PROCUREMENT HISTO	RY AND PLANNING EXHIBIT (P-5A)	G EXHIBIT (P-5A)					DATE	February 1997	,
The contraction of the procure of the process of						C. P-1 ITEM N	IOMENCLATU	Æ			
Second Countractor and Location Countracted Countr	PROCUREMENT OF	F WPNS & TRKD CMBT VEHS / 1 / 7	Fracked Combat Vehicles				ABRAMS	UPGRADE PROGF	AAM (GAO	750)	
String Feb. 96 120	LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD	CONTRACTED BY	AWARD DATE	DATE OF FIRST	ντο	UNIT COST	SPECS AVAIL	SPEC REV	IF YES W/A
TACOM-ACALA WP TACOM-ACALA May-96 Feb-96 120 7 755			AND TYPE			DELIVERY	Each	\$000	NOW	REQ'D	
TACOM-ACALA WR TACOM-ACALA May-96 Feb-96 120 7 765 No 7600-4004 May-96 Feb-96 120 7 765 No 7600-4004 May-97 Feb-96 120 7 765 No 7600-4004 May-97 Feb-96 120 7 765 No 7600-4004 May-97 Feb-96 120 7 765 No 7600-4004 May-97 Feb-96 120 7 765 No 7600-4004 May-96 Feb-96 120 7 765 No 7600-4004 May-96 Feb-96 120 7 765 No 7600-4004 May-96 Feb-96 120 7 765 No 7600-4004 May-96 Feb-97 7600-4004 May-96 Feb-97 7600-70 7 765 No 7600-4004 760	13. Basic Issue Items										
TACOM-ACALA WR TACOM-ACALA May-96 Feb-96 120 7 7 75 No	FY 96	TACOM-ACALA	W	TACOM-ACALA	May-95	Apr-96	5	80	Yes	ž	
TACOM-ACALA WR TACOM-ACALA May-9f Feb-9f 120 7 7% No	FY 97	TACOM-ACALA	WR	TACOM-ACALA	May-96	Feb-96	120	7	Yes	ž	***
TACOM-ACALA WR TACOM-ACALA May-98 Feb-96 120 7 7 7 7 7 7 7 7 7	FY 98	TACOM-ACALA	WR	TACOM-ACALA	May-97	Feb-96	120	7	Yes	ž	
STATIPS/FIIK NIA	FY 99	TACOM-ACALA	WR	TACOM-ACALA	May-98	Feb-96	120	7	Yes	ž	•
NA	14 MI STRIPS/BIK					···					
NIA REQNWR TACOM-ACALA/CECOM Various Feb-97 120 5 Yes No	FY 96	4 /2	REGN/WR	TACOM-ACALA/CECOM	Various	Apr-96	100	2	Yes	ž	
N/A REQNWR TACOM-ACALACECOM Various Feb-99 120 5 7es No	FY 97	N/A	REGNAM	TACOM-ACALA/CECOM	Various	Feb-97	120	2	Yes	ž	
N/A REQN/WR TACOM-ACALA/CECOM Various Feb-99 120 5 Yes No	FY 98	N/A	REGNWR	TACOM-ACALA/CECOM	Various	Feb-98	120	5	Yes	ž	
Syl Grumman /2	FY 99	N/A	REGNWR	TACOM-ACALA/CECOM	Various	Feb-99	120	ຜ	Yes	ž	
St.1 Grumman /2 Grumman /2 Grumman /2 Grumman /2 Grumman /2 Grumman /2 Grumman /2 Grumman /2 Grumman /2 Grumman /2 Grumman /2 Grumman /2 Grumman /2 Grumman /2 Greb /9 Feb -9 / 120											
Grumman / 2	15. VIS/1	į			7	90	- 6	7			
Grumman/2	FY 96/3	Grumman /2	C/FFP/Option	CECOM	C8-590	Apr-90	2 6	0.		2 2	
Grumman/2 C/FFP/Option CECOM Apr-97 Feb-99 120 9 Yes No TBD TBD TBD TBD TBD TBD TBD TBD TBD TBD	FY 97	Grumman /2	C/FFP/Option	CECOM	May-96	760-97	021	5 (Yes	2 :	
Grumman/2	FY 98	Grumman/2	C/FFF/Option	CECOM	Apr-97	260-30	2 5	ה ק	Yes	2 :	
3en FLIR (A Kit) FPDT02 TBD	FY 99	Grumman/2	C/FFP/Option	CECOM	Apr-98	Feb-99	021	on .	Yes	2	
TBD TBD Feb-97 Feb-99 10 1659 Yes Yes TBD TBD OCt-97 Apr-99 120 491 Yes Yes	26. II Gen FLIR (A Kit) FPDT02										
TBD TBD OCt-97 Apr-99 120 491 Yes Yes	FY 98	TBD	TBD	TBD	Feb-97	Feb-99	9	1659		Yes	Apr-97
	FY 99	TBD	TBD	TBD	Oct-97	Apr-99	120	491	Yes	Yes	Apr-97
											•

REMARKS:

VIS, Vehicular Intercommunication System.
 Grumman Aerospace Corp, Bethpage, NY
 40 VIS Components were previously procured in Phase I

BUDGET	BUDGET PROCUBEMENT HISTORY AND PI ANNING EXHIBIT (P-5A)	ORY AND PLANNING	G EXHIBIT (P.5A)					DATE		
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APPROPRIATION / BUDGET ACTIVITY	VITY			P-1 ITEM NOMENCLATURE	81			
PROCUREMEN	UT OF WPNS & TRKD CM	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	Vehicles			ABRAMS UPGRADE PROG	ABRAMS UPGRADE PROGRAM (Adv Proc) (GA0750)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY								
COST (in millions)	297.2	259.1	266.2	270.7	268.4	158.5	128.0	89.3

DESCRIPTION: Advance procurement for long lead materials to support procurement for the Abrams Upgrade Program.

JUSTIFICATION: Without advance procurement funds, procurement of components, assemblies and raw materials to support procurement, long lead time would not be possible and would cause a break in production.

Budget Item Justil

WEAPON SYSTEM ADV		ANCE PROCUREMENT EXHIBIT (P-10)	EXHIBIT (P-10)		BUDGET YEAR 1 FOR FISCAL YEAR PROGRAM 1998	CAL YEAR PROGRAM 1998	
PROCUREMENT OF		OF ADVANCE DESIGN AND MATIERIAL)	D MATIERIAL)		DATE	Cohnism 1007	
Weapon System Type (Model/Series No.)		FIRST SYSTEM AWARD DATE		FIRST SYSTEM COMPLETION DATE		INTERVAL BETWEEN	Τ
ABRAMS UPGRADE PROGRAM		MAR 99		AUG 99		SYSTEM COMPLETIONS (MONTHS)	
Advance Procurement / Advance Funding items	Quantity	Date Contract Award Planned / Required	Delivery Date of First Equipment Required	Production Lead Time in Months (Adm / Prod) - Total	Unit Cost	Total Cost	
1. Basic Vehicle 2. Amor 3. H/TEU 4. Engine (DECU) 5. Transmissions 6. Final Drives 7. Fire Control 8. Track 9. Road Wheels 10. Gun Mounts 11. Gun 12. Drivers Night Viewer 13. Basic Issue Items 14. Mil.STRIPS / RIK 15. VIS 26. II Gen FLIR (B Kits) 27. I Gen FLIR (B Kits) 27. I Gen FLIR (B Kits)	120 120 120 120 120 120 120 120 120 120	Various Mar-98 Mar-98 Various Mar-98 Mar-98 Mar-98 Mar-98 Apr-98 Oct-97	Aug-99 18 Mo Feb-99 16 Mo Feb-99 16 Mo Feb-99 16 Mo Feb-99 16 Mo Feb-99 16 Mo Feb-99 16 Mo Feb-99 16 Mo Feb-99 16 Mo Feb-99 16 Mo Feb-99 17 Mo Feb-9	18 Mo 16 Mo 20 Mo 16 Mo 16 Mo 16 Mo 16 Mo 17 Mo 17 Mo 22 Mo 22 Mo	966 83 270 83 99 99 176 176	26 26 11 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	976 049 6621 4433 554 477 477 1140 674 887 674 674 673 673 673 673 673 673 673 673 673 673
NARRATIVE DESCRIPTION * Delivery is required 6 months prior to tank delivery ** Production Lead Time includes the 6 months requirement for components prior to tank delivery ** Production Lead Time includes the 6 months requirement for new producers or other factors. PLT excludes First Article Test (FAT) or other special test requirements for new producers or other factors. ALT is based on current long term contracts. ALT increase with new starts/new contractors/new contracts.	s prior to tank delivery des the 6 months requ (FAT) or other specie erm contracts. ALT in	ank delivery months for components prior to tank delivery other special test requirements for new producers or othe acts. ALT increase with new starts/new contractors/new c	omponents prior ments for new pr new starts/new co	to tank delivery oducers or other intractors/new col	factors. ntracts.		

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WEAPON SYST	TEM ADVANCE	WEAPON SYSTEM ADVANCE PROCUREMENT EXHIBIT (P-10)	EXHIBIT (P-10)		BUDGET YEAR 2 FOR FISCAL YEAR PROGRAM	CAL YEAR PROGRAM	Г
(PROCUREMENT OF	MENT OF ADVAI	ADVANCE DESIGN AND MATIERIAL	D MATIERIAL)			1999	
	(TOA, Dollar	(TOA, Dollars in Thousands)			DAIE	Fahriiery 1007	-
Weapon System Type (Model/Series No.)		FIRST SYSTEM AWARD DATE	ITE	FIRST SYSTEM COMPLETION DATE		INTERVAL RETWEEN	T
ABRAMS UPGRADE PROGRAM		MAR 00		AUG 00		SYSTEM COMPLETIONS (MONTHS)	_
Advance Procurement / Advance Funding Items	Quantity	Date Contract Award Planned / Required	Delivery Date of First Equipment Required	Production Lead Time in Months (Adm / Prod) - Total	Unit Cost	Total Cost	T
1. Basic Vehicle 2. Armor 3. H/TEI	120	Various Mar-99	Aug-00 18 Mo Feb-00 16 Mo	 18 Mo 16 Mo	1367 85	164006 10229	90 73
4. Engine (DECU) 5. Transmissions	120	Mar-99 Dec-98	Feb-00 16 Mo	16 Mo	22		78
	240	Mar-99	Feb-00 16 Mo	16 Mo	7		873
	18720	Various Mar-99	Feb-00 16 Mo Feb-00 16 Mo	16 Mo 16 Mo	13	1594	94
9. Roadwheels	3840	Mar-99	Feb-00 16 Mo	16 Mo			9 6
	120	Mar-99	Feb-00	16 Mo	36	2186	86
12. Drivers Night Viewer 13. Basic Issue Items	120	96-Inc	Feb-00	13 Mo	91		89
	120	Various	Feb-00	14 Mo	2	84	841 642
15. VIS 26. II Gen FLIR (A Kits) FPDT	120	Apr-99	Feb-00	14 Mo	0 0	1124	1 2
27. II Gen FLIR (B Kits) FPDT	240	Oct-98		22 Mo	74	14616 17662	92
TOTAL:						270691	

NARRATIVE DESCRIPTION							7

varify to be scription * Delivery is required 6 months prior to tank delivery

** Production Lead Time includes the 6 months requirement for components prior to tank delivery.
PLT excludes First Article Test (FAT) or other special test requirements for new producers or other factors.
ALT is based on current long term contracts. ALT increase with new starts/new contractors/new contracts.

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Exhibit P-10a Advanced Procurement Analysis

WEAPON SYSTEM ADV	TEM ADVANCE	ANCE PROCUREMENT EXHIBIT (P-10a)	EXHIBIT (P-10a		PRIOR YEAR FOR FISCAL YEAR PROGRAM 1996	YEAR PROGRAM 1996
WOO)	(COMPARISON OF HE	N OF REQUEST TO EXECUTION	COLION)	, =-	DATE	
	(TOA, Dollar	(TOA, Dollars in Thousands)				February 1997
Weapon System Type (Model/Series No.)		FIRST SYSTEM AWARD DATE	TE	FIRST SYSTEM COMPLETION DATE	ON DATE	INTERVAL BETWEEN
ABRAMS UPGRADE PROGRAM		DEC 96		Aug 97		SYSTEM COMPLETIONS (MONTHS)
Advance Procurement / Advance Funding Items Requested / Actual	Quantity	Date Contract Award Required / Actual	Date Delivery of First Equipment Required / Actual	Production Lead Time in Months Total Requested (Adm/Prod) Actual (Adm/Prod)	Total Cost Requested	Actual Contract Cost
1. Basic Vehicle 2. Amor 3. H/TEU 4. Engine (DECU) 5. Transmissions 6. Final Drives 7. Fire Control 8. Track 9. Road Wheels 10. Gun Mounts 11. Gun Mounts 12. Drivers Night Viewer 13. Basic Issue Items 14. MILSTRIPS/RIK 15. VIS	120 120 240 120 120 120 120 Various 120 120	Various/Various May 96/May 96 May 96/May 96 May 96/May 96 May 96/May 96 May 96/May 96 May 96/May 96 May 96/May 96 May 96/May 96 Apt 96/Jun 96 May 96/May 96 Various/Various Apt 96/May 96 Various/Various	Aug-97 Feb-97 Feb-97 Feb-97 Feb-97 Feb-97 Feb-97 Feb-97 Feb-97 Feb-97 Feb-97 Feb-97 Feb-97 Feb-97	18 Mo 16 Mo 16 Mo 16 Mo 16 Mo 15 Mo 15 Mo 15 Mo 15 Mo	189546 7914 7152 2514 25921 1490 39204 5682 1440 646 804 421 1055	185528 7940 7152 2514 1488 5682 1417 2052 11400 646 804
манкатие резспіртіом * Delivery is required 6 months prior to tank delivery ** Production Lead Time includes the 6 months requirement for components prior to tank delivery. PLT excludes First Article Test (FAT) or other special test requirements for new producers or other factors ALT is based on current long term contracts. ALT increase with new starts/new contractors/new contracts.	prior to tank delivies the 6 months (FAT) or other spring contracts. AL	ank delivery months requirement for components prior to tank delivery. other special test requirements for new producers or other factors. acts. ALT increase with new starts/new contractors/new contracts.	omponents prior oments for new priew starts/new co	to tank delivery.	factors. ntracts.	·

WEAPON SYSTEM ADV	TEM ADVANCE	ANCE PROCUREMENT EXHIBIT (P-10a)	EXHIBIT (P-108	E C	CURRENT YEAR FOR FISCAL YEAR PROGRAM	CAL YEAR PROGRAM	
NOO)	(COMPARISON OF RE	OF REQUEST TO EXECUTION)	CUTION)	•		1997	
		A, Dollars in Thousands)			DATE	February 1997	
Weapon System Type (Model/Series No.)		FIRST SYSTEM AWARD DATE	ΛE	FIRST SYSTEM COMPLETION DATE		INTERVAL BETWEEN	
ABRAMS UPGRADE PROGRAM	SRAM	MAR98		Aug 98		SYSTEM COMPLETIONS (MONTHS)	
Advance Procurement / Advance Funding Items Requested / Actual	Quantity	Date Contract Award Required / Actual	Date Delivery of First Equipment Required / Actual	Production Lead Time in Months Total Requested (Adm/Prod) Actual (Adm/Prod)	Total Cost Requested	Actual Contract Cost	
Basic Vehicle Amor Amor Bride Amor Engine (DECU) Transmissions	120 122 220 120 120	Various Mar 97/Dec 96 Mar-97 Mar-97 FAD-97	Aug-98 Feb-98 Feb-98 Feb-98	16161	127697 9826 6870 2567	6	9310
	240 Various 18720 3840 60	Mar 97/Dec 96 Mar 97/Nov 96 Mar 97/Dec 96 Mar 97/Dec 96	Feb-98 16 Mo Feb-98 16 Mo Feb-98 16 Mo Feb-98 16 Mo Feb-98 16 Mo Feb-98 16 Mo	16 Mo 16 Mo 16 Mo 16 Mo 16 Mo	36693 36693 5801 1447 2095		5682 1417
	120 120 120 Various	Mar-97 Jul-97 May-97 Various		16 Mo 13 Mo 14 Mo	11639 . 660 815 620		
15. VIS 26. II Gen FLIR (A Kits) FPDT 27. II Gen FLIR (B Kits) FPDT	20 10	Apr97 Feb-97 Feb-97	Feb-98 Feb-98 Feb-98	15 Mo 22 Mo 22 Mo	1077 8151 9849		
TOTAL:					259086	164	16409
* Delivery is required 6 months prior to tank delivery	prior to tank deliv	ery					

** Production Lead Time includes the 6 months requirement for components prior to tank delivery.

PLT excludes First Article Test (FAT) or other special test requirements for new producers or tther factors. ALT is based on current long term contracts. ALT increase with new starts/new contractors/new contracts.



						DATE		
	BUD	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	YTIVITY			P-1 ITEM NOMENCLATURE	ш			
PROCUREME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	T VEHS /Tracked Combat \	Vehicles		MO	DIFICATIONS LESS THAN	MODIFICATIONS LESS THAN \$2.0M (TCV-WTCV) (GA0925)	25)
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	9.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0

DESCRIPTION: This funding provides for the procurement of hardware kits, their application, and fielding support costs for modification with costs of \$2.0M or less for Weapons & Tracked Combat Vehicles.

JUSTIFICATION:

WATER/RATION HEATER: Provides mounting provisions and hardware for an electrically operated water heater/cooking unit in the M113 Family of Vehicles. The unit supplies hot water for drinks, reconstitution of rations, bathing and washing, and can be used to boil or fry foods. Increases crew comfort and morale thus improving soldier effectiveness and lengthening the time the soldier can stay in the field.

BUDGET ITEM JUSTIFICATION SHEET	DATE DATE	Eabruary 1097
APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE	ion filme.
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	MODIFICATIONS LESS TI	MODIFICATIONS LESS THAN \$2.0M (TCV-WTCV) (GA0925)

Γ	S		0.0	0.0								
	FY 2003)	J								
	FY 2002		0.0	0.0						·		
	FY 2001		0.0	0.0								
	FY 2000		0.0	0.0								
	FY 1999		0.0	0.0								
	FY 1998		1.0	1.0					•			
	FY 1997		1.0	1.0		7.7.4.7.8					·	
Description	All PYs	Water/Ration Heater	9.0	9.0								
OSIP No.	Classification	1-94-05-4473	Legislative Comp	Totals								



	Ĭ	MODIFICATION INSTALLATION SUMMAR Date	NOIT.	STALL	VTION S	UMMAF	Date	February 1997	26
		٠	TOA, Do	llars in	(TOA, Dollars in Millions)	-			
			L						
System/Modification	FY 1996	EY 199Z	FY 1998	FY 1999	EY 2000	FY 2001	FY 2002	FY 2003	IOTAL
MODIFICATIONS LESS THAN \$2.0M (TCV-WTCV) GA0925 Water/Ration Heater	0.0	0.6	0.5	0.0	0:0	0.0	0.0	0.0	1.1
Totals	0.0	0.6	0.5	0.0	0.0	0.0	0.0	0.0	-

	INDIVIDUAL MODIFICATION	Data Esterios 1907	Γ
MODIFICATION TITLE:	Water/Ration Heater 1-94-05-4473		1
MODELS OF SYSTEMS AFFECTED:	M113A3, M548A3, M577A3, M58, M1064A3, M1068A3		
DESCRIPTION / JUSTIFICATION: WATER/RATION HEATER: Provides mounting Family of Vehicles. The unit supplies hot water Increases crew comfort and morale thus improvi	ESCRIPTION / JUSTIFICATION: WATER/RATION HEATER: Provides mounting provisions and hardware for an electrically operated water heater/cooking unit in the M113 Family of Vehicles. The unit supplies hot water for drinks, reconstitution of rations, bathing and washing, and can be used to boil or fry foods. Increases crew comfort and morale thus improving soldier effectiveness and lengthening the time the soldier can stay in the field.	I water heater/cooking unit in the M113 hing, and can be used to boil or fry foods. e soldier can stay in the field.	
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:			
Preliminary Design Review:	N:	ACCOMPLISHED N/A	
Critical Design Review:		N/A	
Contractor Test and Evaluation:	ration:	N/A	-
IPR Production Decision		N/A	
TDP Avallable:		Mar-95	
·			

				N N	MIDUA	MODI	INDIVIDUAL MODIFICATION	z						٥	Date		February 1997	v 1997	
MODIFICATION TITLE (Cont):		Vater/	Water/Ration	운	r 1-94-	05-44	73												
FINANCIAL PLAN: (\$ in Millions)	i	r																	
	FY 1996 and Prior	Ā	FY 1997	FY 1998	866	FY 1999	666	FY 2000	8	FY 2001	100	FY 2002	20	FY 2003	63	10		TOTAL	A.
	Oty \$	ð	\$	Qt	ક	ð	\$	φ	8	ð	\$	ð	ક્ર	δ	\$	ð	89	ģ	ક્ક
RDT&E							F	-		-									
PROCUREMENT																			
Kit Quantity					-				-							-			
Installation Kits	579 0.6	3 412	4.0	432	0.5													1423	1.5
Installation Kits Nonrecurring																			
Equipment												, =,.							
Equipment Nonrecurring																			
Engineering Change Orders														-,-	_				
Data					•		·-··												
Training Equipment											-								
Support Equipment							-												
Other								_											
Interim Contractor Support							·						_					-	
-														 ,					
Installation of Hardware																			
FY 1996 & Prior Eant Kits		579	9.0															579	9.0
FY 1997 Eapt Kits	-			412	4.0													412	0.4
FY 1998 Eqpt Kits				108	0.1		····									324	4.0	432	0.5
FY 1999 Eqpt Kits																•			
FY 2000 Eqpt kits																			
FY 2001 Eqpt kits																			
FY 2002 Eqpt kits																	•		
FY 2003 Eqpt kits													•	-		-			
(FY(TC) Eqpt (xx kits)																			
Total Installation Cost		579	9.0	520	0.5											324	0.4	1423	1.5
Total Procurement Cost	9.0		1.0		1.0												0.4		3.0
		ļ			TACTO	, U . U .	SALES TO STORY OF STATES		3	4		- MITAND I MOITOI I GOOD	i de	ALT CALL	ij	1	Months		
METHOD OF IMPLEMENT ATTOM: Deboudebot Teams	I. Delboy Delbot	reality	0		בנוס				, 70 vol		_ 1			֡֝֝֝֜֜֜֝֜֜֜֜֝֓֜֜֜֜֜֜֜֓֓֓֓֓֓֡֓֜֜֜֜֡֓֓֓֓֡֡֜֜֜֡֡֡֡֡֓֜֜֜֡֡֡֡֡֡	į		2		
Contract Dates:	FY 1997:	.; ;	Jan 97		•	FY 1998:		د <i>-</i>	/6 AON		1	FY 1999:							
Delivery Date:	FY 1997:	97:	Jall 97			FY 1998:		2	36 IDC			FY 1999:							

FV 1986	Installation Schedule:		r/Ratio	Į Į	otor 1	0.7	747	c																		l
# Prior 1 2 3 4 1 3 3 4 3 3 4 3 3 3 4 3 3 3 4 3 3 3 4 3		,			2	1-1-1	1++-0	כ									Date		œ.	bruary 19	97					
& Prior 1 2 3 4 1 3 4 1 3		FY 1996	Œ	1997			Ĺ	7 1998			Ŧ	1999			FΥ	2000			FΥ	001						
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198 137 197 8 Phór 193 193 193 196 324 FY 2000 FY 2001 FY 2002 FY 2004 FY 2005 1 2 3 4 1 2 3	FY 1996 & Prior		9			33																				į
198 193 193 193 193 193 193 193 193 193 193	FY 1997																									6/6
R Phior 193 193 193 194 197 137 106 324 106 324 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 1 1 1 1 2 3 1 1 1 1 1 1 1 1 1 1 1	FY 1998																									412
8 Prior 198 193 197 137 108 324 108 324 FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 3 3 4 3 3 4 3 3	FY 1999								<u> </u>		•									_						432
# Prior 183 193 193 197 137 108 324 FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 1 2 3 1 1 1 2 3 1 1 1 2 3 1 1 1 2 3 1 1 1 2 3 1 1 1 2 3 1 1 1 1	Ş																									
# Prior 193 193 193 193 193 193 193 193 193 193	Outputs																									
138 137 137 108 324 FY2000 FY2001 FY2002 FY2003 FY2004 FY2005 1 2 3 4 1 2 3	FY 1996 & Prior		9			£																				579
FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1	FY 1997					¥																				5 5
FY2000 FY2001 FY2002 FY2003 FY2004 FY2005 1 2 3 4 1 2	FY 1998																									412
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FY2000 FY2001 FY2002 FY2003 FY2004 FY2005 1 2 3 4 1 2																										
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	Outputs																									
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FY 2002 FY 2003 Remarks:	FY 2001																									
FY 2003 Remarks:	FY 2002																									
Remarks:	FY 2003																									
	Remarks:																									
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						DATE		
	BOE	BUDGET ITEM JUSTI	TIFICATION SHEET	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	YTIVITY			P-1 ITEM NOMENCLATURE				
PROCUREMI	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	3T VEHS /Tracked Combat	Vehicles			ITEMS LESS THAN \$2.0M (TCV-WTCV) (GL3100)	M (TCV-WTCV) (GL3100)	
	FY 1996	FY 1997	.FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2

DESCRIPTION: Provides for procurement/assembly of full tracked vehicle organizational maintenance tool/shop sets. This equipment has multiapplications and is essential for effective maintenance on all tracked vehicles.

JUSTIFICATION: Required to provide organizational maintenance personnel with equipment essential to maintain full tracked vehicles in an acceptable state of readiness. Funding of this program will establish and maintain the operational capability of the Bradley Fighting Vehicle, M1 Tank, etc.

)St	0	6	Ξ	12				
TE February 1997	,		UnitCost	000\$							
D. DATE Febr		FY 99	Qty	Each	V-	6	60				
			TotalCost	000\$	6	33	95				137
C. MANUFACTURER NAME Rock Island Arsenal			UnitCost	000\$		-	12				
		FY 98	Qfy	Each		4	- α				
WEAPON ITEMS LESS THAN \$2.0M (TCV-WTCV)	(00		TotalCost	\$000		44	95		 -		 139
N LESS THAN \$	(GL3100)		UnitCost	000\$		Ŧ	12			·	
B. WEAPON ITEMS		FY 97	Qty	Each	-	ю	6		 		
ABT VEHS / 1 /			TotalCost	\$000		33	108		 	in the second second	 141
A. APPN/BUDGET ACTIVITY TITLEINO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 /	Tracked Combat Vehicles		UnitCost	\$000	6	10	Ξ.				
T ACTIVITY NT OF WP	Tracked C	FY 96	Q Q	Each	8	е .	o		 		
A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TR			TotalCost	\$000	18	30	66	*			 147
	1	₽	8		∢	∢	4				
Sis					G314	G352	G649				
WTCV Cost Analysis		WTCV	Cost Elements		1. Shop Equip, Contact Repair Shop, Light Vhl Mtd	2. Shop Set, Contact and Emergency Repair, FM	3. Tool Set, Full Tracked Vehicle, Org Maint, Sup 2				TOTAL

				-		DATE		
	BUDG	BUDGET ITEM JUSTI	FICATION SHEET	ET		February 1997		
APPROPRIATION / BUDGET ACTIVITY	FIVITY			P-1 ITEM NOMENCLATURE	ų.			
PROCUREME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	T VEHS /Tracked Combat	Vehicles		-	PRODUCTION BASE SUPPORT (TCV-WTCV) (GA0050)	ORT (TCV-WTCV) (GA0050	6
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	5.3	6.6	8.9	9.2	9.4	9.9	10.7	10.7

DESCRIPTION: This program provides for Provision of Industrial Facilities (PIF). Funds are used to establish, modernize, expand or replace facilities owned by the production and production testing of Weapons and Tracked Combat Vehicles. This program also provides funding for the Layaway of Industrial Facilities (LIF) for Army. It provides Production Support, Equipment Replacement (PSR) and Modernization (MOD) to Government owned equipment, real property used in preservation of equipment and portions of plants which are no longer required for active production and Environmental (Env) restoration to comply with Occupational Safety Health Act (OSHA) for the Environmental Protection Agency (EPA).

JUSTIFICATION: The FY98 and FY99 request supports major rehabilitation of industrial plant equipment at various facilities, in acquiring components and spare parts for the M-1 and the M-1 Upgrade Program. Contractor plants supported are Lima Army Tank Plant and Scranton Facility.

FY 1999	8.800 0.350	9.150
FY 1998	8.585	8.942
FY 1997	8.959 0.360	9.319
FY 1996	3.443 0.432 1.448	5.323
	PIF LIF ENV	TOTAL



Projects

Production Support and Facilities Projects		DATE Febru	February 1997	
APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE			
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles		PRODUCTION BASE SUPPORT (TCV-WTCV) (GA0050)	V) (GA0050)	
PROJECT NO. TYPE NAME / LOCATION	EY 1996	FY 1997	FY 1998	FY 1999
E Stratford Army Engine Plant Provides for correction of OSHA/EPA deficiencies and minimum facility projects in support of tank engine production. The Stratford plant manufactures the AGT 1500 engine for the ABRAMS tank.	ify 1.448			

							DATE				
	~	BUDGET ITEM JUSTII	M JUSTIFICA	FICATION SHEET				Februa	February 1997		
APPROPRIATION / BUDGET ACTIVITY	IVITY				P-1 ITEM NOMENCLATURE	ATURE					
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Com	WPNS & TRKD CM	BT VEHS /Weapons	and Other Combat V	bat Vehicles			4	ARMOR MACHINE GUN, 7.62MM (G13000)	UN, 7.62MM (G1300	6	_
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	0	0	2,034	0	673	1,856	1,875	0	0	2,768	9206
COST (in millions)	0.0	0.0	20.0	0.0	7.0	19.2	19.8	0.0	0:0	29.4	95.4
Initial Spares (in millions)											
Total (in millions)	0.0	0.0	20.0	0.0	7.0	19.2	19.8	0.0	0.0	29.4	95.4
Unit Cost (in millions)	0.000	0.000	0.010	0.000	0.010	0.010	0.011	0000	0.000	0.011	0.010

flash suppressor, front sight, carrying handle for the barrel, buttstock, pistol grip, bipod, heat shield and rear sight assembly. The M240B Machine Gun may DESCRIPTION: The M240B Machine Gun is a ground version of the M240 Machine Gun, the 7.62mm Medium Machine Gun class weapon designed as a features fixed head space, which permits rapid changing of the barrels. The principle difference between the M240 and the M240B is the addition of a coaxial/pintle-mounted weapon for tanks and light armored vehicles. The M240B is an air cooled, link-belt fed, gas operated weapon. The weapon also be tripod-mounted and used in conjuction with a traversing and elevating mechanism and a flex mount pintle.

JUSTIFICATION: The M240B Medium Machine Gun is an infantry version of the M240 Armored Machine Gun intended to replace the M60 Series Machine Medium Machine Guns in order to provide the dismounted infantryman a more reliable, accurate, and lethal medium machine gun to suppress and destroy Gun in light infantry, mechanized infantry, and combat engineer units. The US Army has identified a need to upgrade its current inventory of 7.62mm enemy personnel, lightly armored vehicles, and fortified positions.

This P-form only reflects the quantity bought under the Armor Machine Gun budget line. The total Army Procurement Objective of 10,406 M240B model 7.62mm medium machine guns includes 1,200 weapons procured in FY1996 on GZ1300 (Medium Machine Gun Mod) and 9,206 weapons procured on

1996 Weacons and Other Combat Vahields	WTCV Coet Analysis	<u> </u>	A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRI	T ACTIVITY NT OF WP	TITLE/NO 'NS & TRKD CI	A APPN / BUDGET ACTIVITY TITLE/NO PHOCUREMENT OF WPNS & TAKD CMBT VEHS / 2 /	B. WEAPON ARMOR N	N RACHINE GL	WEAPON ARMOR MACHINE GUN, 7.62MM (G13000)		C. MANUFACTURER NAME FN Manufacturing, Inc.		D. DATE Febru	\TE February 1997
Cost Elements Prigo Frigo			Weap	O pue suo	ther Combat V	ehicles								
Cost Elements on Totalcost Ory Uniticost Totalcost Ory Uniticost Totalcost Ory Uniticost Totalcost Ory Uniticost Totalcost Ory Uniticost Totalcost Ory Uniticost Ory Uniticost Ory Uniticost Ory Uniticost Ory Uniticost Ory Uniticost Ory Uniticost Ory Uniticost Ory Uniticost Ory Ori Ori Ori Ori Ori Ori Ori Ori Ori Ori	WTCV			FY 96			FY 97			FY 98			FY 99	
## \$000 Each \$000 Each	Cost Elements	8	TotalCost	ð	UnitCost	TotalCost	ð	UnitCost	TotalCost	ð	UnitCost	TotalCost	Q.	UnitCost
9 (Januaria & Blank and Land & Blank and		H	\$000	Each	\$000	\$000	Each	\$000	000\$	Each	\$000	\$000	Each	\$000
# Assurance (APDEC) 63 Assurance (APDEC) 63 ### Assurance (APDEC) 63	 Hardware (Incls Flex Mount & Blank Firing Device) 					18910		6				6518		10
hing Studies (TECOM) TECOM) 120 120 130 140 150 160 160 160 170 170 170 170 17	2. Engineering Support - In House Support					324						122		
TECOM) TECOM) 120 130 140 140 140 140 150 150 160 160 160 160 160 16	3. Quality Assurance (ARDEC)					63				•		22		
TECOM) 120 120 19961	4. Engineering Studies					305				-		100		
1998 1	5. Testing (TECOM)					120						120		
16661	6. Fielding					259						85		
	TOTAL					19981						2969		

BUDGET PRO	BUDGET PROCUREMENT HISTORY AND	PLANNIR	BY AND PLANNING EXHIBIT (P-5A)					DATE	Eshaisa, 1007	
B. APPROPRIATION / BUDGET ACTIVITY			()		C. P-1 ITEM P	C. P-1 ITEM NOMENCLATURE	7E	Ď	Juany 18	
PROCUREMENT OF WPNS & TR	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles	r Combat Vehi	icles			ARMOR M	ARMOR MACHINE GUN, 7.62MM (G13000)	2MM (G130	(00	
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST	QTY facil	UNITCOST	SPECS AVAIL NOW	SPEC REV	IF YES W/A
Hardware (Incls Flex Mount & Blank Firung Device)								_		
FY 97 FY 99	FN Manufacturing, Inc., Columbia, SC FN Manufacturing, Inc., Columbia, SC	SS/FFP SS/FFP M-3(1)	ACALA ACALA	Aug-97 Apr-99	Aug-98 Apr-00	2034	10	No Yes	% % %	Sep-96
								W. C. C. C.		
REMARKS:										

urement lanning

Exhibit P-5A History

							P-1 ITEM NOMENCLATURE	NOME	VCLAT	URE								ĺ	ĺ	DATE	111							
FY 98 / 99 BUDGET PRODUCTION SCHEDULE	a	JCTION	S		03004	140		١			ARMOR MACHINE GUN, 7.62MM (G13000)	MACHI	DE GO	9.7	S) WM	13000				j	80	Flecal Vear 97	7 P	February 1997	۵		F	Ţ
	2		Ø		PRIOR .	DO .			L			ျပီ	Calendar Year 96	ar Ye	ar 96	1			H		Ü	lend	lar Y	Calendar Year 97	_	l	· `	
COST ELEMENTS	шα	<u></u>	m a:>	Each	1 OCT	AS OF 1 OCT	00+	ошо	¬ ∢ z	т п ю	Σ < α	∀	7 D Z	227	۷ D و	αшα	0 O F	NO>	¬ ∢ Z	т п в	∑ < Œ	4 G G	≥ ∢≻	7 D Z		A ⊃ Ω		⊢шк
Hardware	H									H	H	H	Н	Ц			\vdash	\vdash	Н	Ц			П	H	H	\vdash	Ц	П
	1	FY 97	٧	2034	0	2034					\dashv	-	_				\dashv	\dashv	4	\bot			٦	\exists	+	<u> </u>	8	2034
	-	FY 99	٧	673	0	673				П		Н						-		_					\dashv	\dashv	9	673
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Exhibit P-21 Produc

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FN Manufacturing Inc	\dagger	8	200	l	350	٤		E S	REORDER	T	T		7	\mathbb{H}	ြိ	П		8	H		14	€ ;	199-01	(FY99-01). FY97 delivery period	7 delive	ny peri	8	
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	a	BUDGET ITEM JUSTI	=	FICATION SHEET	H.			Februa	February 1997		
APPROPRIATION / BUDGET ACTIVITY	TIVITY				P-1 ITEM NOMENCLATURE	LATURE					
PROCUREMENT O	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	9T VEHS /Weapons	and Other Combat V	/ehicles				MACHINE GUN, 5.56MM (SAW) (@12900)	3MM (SAW) (G12900	•	
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	EV 2002	EV 2003	To Complete	Total
QUANTITY	56707	9430	3802	406	1570			7007	2007	7003	70000
COST (in millions)	139.0	27.6	12.1	5.6	4.9	0.0	0.0	0.0	00	23.0	212.0
Initial Spares (in millions)										200	21212
Total (in millions)	139.0	27.6	12.1	5.6	4.9					23.0	212.2
Unit Cost (in millions)	0.0	0:0	0.0	0.0	0.0					0.0	0.0

DESCRIPTION: The Squad Automatic Weapon (SAW) is a lightweight (22 pounds with 200 rounds of ammunition), 5.56mm, one-man operated weapon capable of delivering a sustained volume of automatic, accurate, and lethal fire at ranges of up to 800 meters. The Army configuration was changed Oct 89 to include a spare barrel, additional heat shield and barrel bag.

elements of the air cavalry units, as well as non-infantry units. This procurement profile will equip selected elements of the above mentioned units on their survivability. This lightweight, highly mobile machine gun will be used by infantry, light infantry, airborne infantry, mechanized infantry and JUSTIFICATION: The sustained fire capability and increased range are urgently needed throughout infantry rifle squads in order to enhance a priority basis.

WICV Cost Anglysis	<u> </u>	A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRA	T ACTIVITY AT OF WP	TITLE/NO NS & TRKD CI	A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 /	B. WEAPON MACHINE	N INE GUN, 5.56	WEAPON MACHINE GUN, 5.56MM (SAW) (G12900)		C. MANUFACTURER NAME FN Mfg. Co.		D. DATE Febr	rie February 1997
WICY COSt Alidiysis	-	Weap	O pue suc	Weapons and Other Combat Vehicles	ehicles								
	₽		FY 96			FY 97			Fγ 98			FY 99	
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3. Engineering Support - In House Support		54			50			445			200		
4. Quality Assurance (ARDEC)		40			106			68			35		
5. Testing (TECOM)		115			150			Terr v Terr			115		
6. Engineering Change Proposal (ECP's)					444			20			25		
7. ILS	*****	65			65			09			90		
8. Fielding		1801			1236			3837			145		
9. TDP Maintenance		58	***				_ 						
10. Storage					35								
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12. Modified Work Order		2											
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BUDGET PRO	BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	PLANN	NG EXHIBIT (P-5A)					DATE		
B. APPROPRIATION / BUDGET ACTIVITY								- -	February 1997	١
PROCUREMENT OF WPNS & TR	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles	r Combat Veh	icles		C. P-1 ITEM N	C. P-1 ITEM NOMENCLATURE MACHINE GE	ENCLATURE MACHINE GLIN 5 SEMM (SAW) (312900)	WV (G120	S	
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT	CONTRACTED BY	AWARD DATE	DATE OF FIRST	λŁσ	UNIT COST	SPECS	EV EC	F YES W/A
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FY 96	FN Mfg. Co., Inc., Columbia, SC	SS/FFP M-3(1)	ACALA	96-Jnr	Jan-97	9430	С	Yes	 8	
FY 97	FN Mfg. Co., Inc., Columbia, SC	SS/FFP M-3(2)	ACALA	969G	Sep-98	3802	ю	Yes	8	
FY 98	FN Mfg. Co., Inc., Columbia, SC	SS/FFP M-3(3)	ACALA	Jan-98	96-unc	406	ю	Yes	2	
FY 99	FN Mfg. Co., Inc., Columbia, SC	SS/FFP ACALA	ACALA	Jan-99	Jul-99	1570	က	Yes	£	
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	Δ	BUDGET ITEM JUSTI		FICATION SHEET	: :			Februa	February 1997		
APPROPRIATION / BUDGET ACTIVITY	VITY				P-1 ITEM NOMENCLATURE	LATURE					
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Com	WPNS & TRKD CME	3T VEHS /Weapons	and Other Combat Ve	bat Vehicles			GRENAI	GRENADE LAUNCHER, AUTO, 40MM, MK19-3 (G13400)	TO, 40MM, MK19-3	(G13400)	
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete Total Program	Total Program
QUANTITY	11766	1500	2150		720	1067	783	1124	1595	986	21691
COST (in millions)	181.7	32.8	33.2	0.0	13.1	19.9	14.9	21.9	31.8	17.7	367.0
Initial Spares (in millions)											
Total (in millions)	181.7	32.8	33.2		13.1	19.9	14.9	21.9	31.8	17.7	367.0
Unit Cost (in millions)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0

rounds per minute. It will engage point targets up to 1,500 meters and provide suppressive fire up to 2,200 meters. Component items for this system DESCRIPTION: The MK19, Mod 3 is a self-powered, air-cooled, blowback, 40mm automatic grenade launcher capable of a cyclic rate of 325-375 include the 40mm asssembly group 1 and the MK64 mount.

CONUS requirements. The MK175 Pedestal Mount is being incorporated on the MK64 Mount to improve the accuracy and dispersion of the MK19-3 when JUSTIFICATION: The weapon will be mounted on the High Mobility Multi-Purpose Wheeled Vehicle (HMMWV), the Armored Personnel Carrier family of support units. Procurement will help reduce critical supply position for high-priority equipment readiness code (ERC) A shortages in Europe, Korea, and select M2 cal .50 and M60 7.62mm machine guns in mechanized, light infantry, engineer, military police, and other combat support and combat service vehicles and the M88A1 Recovery Vehicle. During static defensive operations, it will be ground employed utilizing the M3 Tripod Mount. It will replace used on the HMMWV application.

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Cost Elements	WICV COST Analysis		Weap	O pue suc	her Combat V	ehicles		(G13	400)					
Cost Elements	WTCV	aı		FY 96			FY 97			FY 98			FY 99	
Hardware 2007 (Each \$000 (Each \$0	Cost Elements	СО	TotalCost	Q Qfy	UnitCost	TotalCost	Q.	UnitCost	TotalCost	ģ	UnitCost	TotalCost	Qty	UnitCost
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FY97	SACO Defense, Saco, Malne	SS/FFP	ACALA	Nov-96	May-98	320	13	Yes	₽	
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FY99	SACO Defense, Saco, Maine	SS/FFP M-3(2)	ACALA	Dec-98	Mar-00	720	4	Yes	8	
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Exhibit P-21 Production Schedule

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APPROPRIATION / BUDGET ACTIVITY	YTIN				P-1 ITEM NOMENCLATURE	LATURE					
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other	WPNS & TRKD CME	3T VEHS /Weapons	and Other Combat Vehicles	/ehicles				M16 RIFL	M16 RIFLE (G14900)		
	Prior Years	FY 1996	FY 1997	FY 1998	FV 1999	EV 2000	EV 2004	EV 2002	V7.		i i
	11.5					2002	1 1 2001	1 5002	2003	lo Complete	lotal Program
QUANTITY	510841	31056	15583	11297	21077	23767	19890	0	0	176639	810150
COST (in millions)	234.2	13.1	6.5	5.1	9.2	10.2	101	00	00	440.0	400.0
							2	9	2.5	140.3	453.3
Initial Spares (in millions)											
lotal (in millions)	234.2	13.1	6.5	5.1	9.2	10.2	10.1	0.0	0.0	140.9	429.3
Unit Cost (in millions)	0.000	0.000	0.000	0.000	0000	0000	0.001	0000	0000	0.004	1000

aluminum magazine and is designed for use as the primary infantry weapon. The M16A2 is an improved version the M16A1 Rifle. Improvements include: from hitting left-handed shooters, and a stronger barrel reinforced with additional metal and a change in the twist ratio of the bore to accommodate NATO compensator which reduces the raise or jump of the muzzle when fired, a burst control device limiting the automatic fire to a miximum of three rounds per trigger pull, and adjustable rear sight and square front sight post for a more distinct sight picture, a brass deflector to prevent hot brass cartridge casings DESCRIPTION: The M16A2 Rifle, 5.56mm, is a gas operated, air cooled, magazine fed, selective rate shoulder fired weapon. It is fed by a 30 round strengthened plastic handguard, rifle stock and pistol grip to increase durability of the weapon, interchangeable handguard halves, muzzle brake standard 5.56mm ammunition. The maximum effective range of the M16A2 has increased from 460 to 550 meters. JUSTIFICATION: The M16A2 Rifle Program for FY98/99 provides additional rifles for fielding against the Force Modernization requirement for pure fleeting the field with the M16A2 Rifle. Without additional M16A2 Rifles, a logistic problem associated with different ammunition requirements for the M16A1 vs M16A2 is perpetuated. Funding also supports the M16 Rifle Industrial Base.

This P-Form only reflects the Qty bought under the M16 Rifle Line. The total Army Procurement Objective of 925,450 M16A2 rifles includes 115,300 weapons purchased on GZ2800 (M16 Rifle Mods) and 810,150 weapons procured on G14900.



	┢	. APPN / BUDGE	T ACTIVITY	TITLE/NO	A. APPN / BUDGET ACTIVITY TITLE/NO	B. WEAPON	1		Ĭ	C. MANUFACTURER NAME	Г	D. DATE	
WTCV Cost Analysis		PHOCUMEME Weap	ons and O	Meapons and Other Combat Vehicles	MBI VEHS/2/		M16 RIFLE (G14900)	(G14900)	-	FN Mfg. Co.	g. So.	Febr	February 1997
WTCV	₽		FY 96			FY 97			FY 98			FY 99	
ents	8	TotalCost	Oth	UnitCost	TotalCost	Qt	UnitCost	TotalCost	Oty Oty	UnitCost	TotalCost	Qty	UnitCost
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2. Engineering Support - In House Support		343	.	***************************************				409			415		
3. Engineering Change Proposals		125			83			40			64		
4. Quality Assurance (ARDEC)		47			45			46			48		
5. Integrated Logistics Support		65			65		-	65			65		
6. Testing (TECOM)					130						138	***************************************	
7. Fielding		133			18			30			9		
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FY97	FN Mfg. Co., Inc., Columbia, SC	C/FFP	ACALA	Nov-96	Dec-98	10320	398	Yes	2	
	FN Mfg. Co., Inc., Columbia, SC TBS		ACALA ACALA	Nov-96	Jul-99	1548	398	Yes	2 2	
FY 98	FN Mfg. Co., Inc., Columbia, SC		ACALA	Jan-98	Aug-99	11297	398	Yes	2	-
FY 99	FN Mfg. Co., Inc., Columbia, SC		ACALA	Jan-99	Apr-00	21077	398	Yes	2	
		M-5(4)								
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TOTAL	684.0	653.5	30.5	1.5	1.6	1.6	1.6	5.	1.5	1.5	7.5	7. 2.	1.5	1.5	5.	1,5	22	2	5.	9.6	4		
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FN Míg. Co., inc., Columbia, SC	8	17	18		REORDER	R				Ц	2	Ħ		4	Ц	6	П	acquis	Ition st	acquisition strategy from single year to	from sli	ngle ye	ar to
2 Colt's Mfg Co., Inc., Hartford, CT	4	9	₽		INITIAL					1		+			1		T	3,517	Weapor	3,517 weapons (FY97 funds) are to be	7 fund	s) are (- eq
3 TBS					HECHUER		1			\downarrow		t			1		T	awarde	ed com	awarded competitively between Coll's	aly bety	veen C	olt's
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	Φ.	UDGET ITE	BUDGET ITEM JUSTIFICATION SHEET	ATION SHEE	:.			Februa	February 1997		
APPROPRIATION / BUDGET ACTIVITY	IVITY				P-1 ITEM NOMENCLATURE	LATURE					
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	WPNS & TRKD CME	BT VEHS /Weapons	and Other Combat Vo	ehicles				5.56 CARBINE	5.56 CARBINE M4 (G14904)		
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete Total Program	Total Program
QUANTITY	57474	9785	10603	7484	15352	8477	8016			2751	119942
COST (in millions)	31.8	6.3	6.5	5.1	9.6	5.6	5.6	0.0	0.0	1.9	72.4
Initial Spares (in millions)											
Total (in millions)	31.8	6.3	6.5	5.1	9.6	5.6	5.6				72.4
Unit Cost (in millions)	0.0	0:0	0.0	0.0	0.0	0.0	0.0				0.0

operating in close quarters the capability to engage targets at extended ranges with accurate lethal fire. Although more compact and featuring a collapsible magazine and will replace all M3A1 WWII era .45 cal Submachine guns, and selective M16 series rifles and M9 pistols. It provides the individual soldier DESCRIPTION: The M4 Carbine is a 5.56mm gas-operated, air-cooled, magazine-fed, selective-rate, shoulder-fired weapon. It is fed by a 30-round stock, it achieves over 85% commonality with the M16A2 rifle. The effective range is 500 meters.

in close quarters. The FY98/99 program will allow for the uninterrupted fielding of the M4 Carbine to Army units. Procurement Is necessary to achieve the JUSTIFICATION: The M4 Carbine will provide soldiers with a compact, light-weight weapon that can provide better self protection and additional firepower Army Acquisition Objective (AAO) for the M4 Carbine.



D. DATE February 1997	FY 99	Ĺ	Each \$000	15352 1				 			1,117			•	 	
D. D4	FY	<u></u>	\$000 Ea	8545 15	375	92	75	65			416	9568				
C. MANUFACTURER NAME TBS		UnitCost	000\$	-												
	FY 98	Qty	Each	7484												
5.56 CARBINE M4 (G14904)		TotalCost	000\$	4166	425	105	75	92			253	2089				
ON 5.56 CARBINE		UnitCost	000\$	-												
B. WEAPON 5.	FY 97	Q l	Each	10603												
APPN / BUDGET ACTIVITY TITLENO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Washans and Other Combat Vahicles		TotalCost	000\$	5902		46	75			175	348	6546				
BUDGET ACTIVITY TITLENO IREMENT OF WPNS & TRKD CMBT VE Warnons and Other Combat Vehicles		UnitCost	000\$	-												
T ACTIVITY NT OF WI	FY 96	Qŧ	Each	9785											· •	
A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRIV Weapons and Other Comb		TotalCost	\$000	5161	400	59	75	65	220		312	6292				
	<u></u>	S	H	∢									 			
WTCV Cost Analysis	WTCV	Cost Elements		1. Hardware M4 Carbine w/Sling Magazine & Blank Firing Attachment	2. Engineering Support - In House Support	3. Engineering Change Proprosals (ECP's)	4. Quality Assurance (ARDEC)	5. ILS	6. Engineering Studies	7. Comparison Test (TECOM)	8. Fielding	ТОТАL				

BUDGET PRO	BUDGET PROCUREMENT HISTORY AND	PLANN	OBY AND PLANNING EXHIBIT (P.5A)					DATE		
B. APPROPRIATION / BUDGET ACTIVITY			(50.1)					ц.	February 1997	997
PROCUREMENT OF WPNS & TR	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles	r Combat Veh	icles		C. P-1 ITEM I	C. P-1 ITEM NOMENCLATURE	TURE CABBINE MA (CAACOA)	(7007)		
CATA LACORD AND THE SAME		CONTRACT	П	004444	10 11 01	6.6	O CAMBINE M4 (G	14904)		
LIVE TEM / FISCAL VEAN	CONTRACTOR AND LOCATION	METHOD	CONTRACTED BY	DATE	FIRST	ΔTΛ	UNITCOST	SPECS	SPEC REV	F YES W/A
Hardware		STI ON			DELIVERY	Each	\$000	MON	REQ'D	
FY 96	Colt's Mfg Co., Inc., Hartford, CT	SS/FFP ACALA	ACALA	Sen-96	Mar.og	0785	•		2	
E				2	200	6	=	SB	<u> </u>	
	S 89	C/FFP M-4(1)	ACALA	Jun-97	Nov-98	10603	-	Yes	2	
FY 98	7 BS	C/FFP M-4(2)	ACALA	Jan-98	Aug-99	7484		Yes	2	
FY 99	18 S	C/FFP M-4(3)	ACALA	Jan-99	Feb-00	15352	***	Yes	2	
REMARKS:										



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Exhibit P-5A History

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Exhibit P-21 Produd

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FY 96 / 97 BUDGET PRODUCTION SCHEDULE		YOUT	SCHE	파						İ	f	5.56 C	5.56 CARBINE M4 (G14904)	E M4	G1490	g	ļ		١	7		ŀ		Febru	February 1997	2		Ì
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	BUC	BUDGET ITEM JUST	TIFICATION SHEET	IEET			February 1997		
APPROPRIATION / BLIDGET ACTIVITY	NT/VI						ion famine		_
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PROCUREMENT OF	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	HS /Weapons and Other Co	imbat Vehicles			M4 CARBINE A	M4 CARBINE MODS (GB3007)		
									_
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	EV 2002	EV 2002	_
VENTINALIO		(ů				7007	FT 2003	_
מטאוווו	0	0	0	0	0	c	c	c	
COST (in millions)	60	2.1	9.0	0 11	3				_
,		11	2.2	5.0	2.0	0.0		0	_

DESCRIPTION: The M4 Carbine Modification Program provides a close combat optic, a modular weapon suite and an improved buttstock for the M4 Carbine and also provides the capability for firing the M203 Grenade Launcher (GL) with the M4 Carbine. JUSTIFICATION: The close combat optic allows the soldier to fire a weapon with both eyes open allowing greater awareness of events happening in key component of Land Warrior Lethality and allows the combat commander to custom configure weapons based upon the mission . The improved buttstock provides the rifleman an ergonomically optimized buttstock for the M4 Carbine. close proximity and improves hit probability in daylight, low light level, wet weather and other adverse conditions. The modular weapon system is a

PPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF WPNS & TRKD CMBT VEHS //Weapons and Other Combat Vehicles PROCUREMENT OF WPNS & TRKD CMBT VEHS //Weapons and Other Combat Vehicles

	FY 2003		0.0		0.0		C	2:0	0.0	0.0	
	FY 2002		0.0		0.0		0.0		0.0	0.0	
	FY 2001		0.0		0.0		0.0		0.0	0.0	
	FY 2000		5.6		0.0		0.0		0.0	5.6	
	FY 1999		2.6		0.0		1:		1.6	5.3	
	FY 1998		7:		0.0		0.4		0.7	2.2	
	FY 1997	(M4 Carbine)	1.4		0.3	tem (M4 Carbine)	0.4		0.0	2.1	
Description	All PYs FY 1997	Close Combat Optics	6:0	M203 for M4 Carbine	0.0	Modular Weapon System (M4 Carbine)	0.0	M4 Improved Buttstock	0.0	0.9	
OSIP No.	Classification	TBD1	OPERATIONAL	TBD2	Operational	TBD3	Operational	TBD4	Operational	Totals	

	Ξ	5		MODIFICATION INSTALLATION SOMMAHDATE	りょうこと		Date		
								February 1997	7.
			(TOA, D	ollars in	(TOA, Dollars in Millions)				
	žá								
System/Modification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
No P3a Set for modification MAA CABBINIE MODE	*								
GB3007								-	
Close Combat Optics (M4 Carbine)	0.0			0.0		C		Ċ	c
M203 for M4 Carbine	0.0			0.0				9 6	0.00
Modular Weapon System (M4 Carbine)	0.0	0.0	0.0	0.0		0.0		9: 0	0.0
M4 Improved Buttstock	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Totals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	INDIVIDUAL MODIFICATION		Date February 1997
MODIFICATION TITLE:	Close Combat Optics (M4 Carbine) TBD1		
MODELS OF SYSTEMS AFFECTED:	M4 Carbine, XM68 Sight Reflex, XM195 Sight Mount	ount	
DESCRIPTION / JUSTIFICATION:			
The XM68 Sight will be installer open allowing greater awarene: daylight, low light level, wet we:	The XM68 Sight will be installed on the M4 Carbine with XM195 Mount. The close combat optic allows the soldier to fire a weapon with both eyes open allowing greater awareness of events happening in close proximity. The close combat optic gives the soldier greater hit probability in daylight, low light level, wet weather and other adverse conditions.	e combat optic allows the sc se combat optic gives the s	oldier to fire a weapon with both eyo oldier greater hit probability in
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	ELOPMENT MILESTONES:	PLANNED	ACCOMPLISHED
Development/Operational Test	est .		1/2096
Type Classification			4Q96
Production Contract Award			4096
First Production Hardware Delivered	Delivered		1Q97
First Unit Equipped		3Q97	

					<u>Q</u>	VIDUAL	INDIVIDUAL MODIFICATION	ICATIO	z						Date			February 1997	266	
MODIFICATION TITLE (Cont):		0	lose C	Close Combat		s (M4	Optics (M4 Carbine) TBD1	e) TBI	5											
FINANCIAL PLAN: (\$ in Millions)																				
	and	and Prior	FY 1997	266	FY 1998	96	FY 1999	66	FY 2000	8	FY 2001	-	FY 2002	L	FY 2003		2	-	TOTAL	
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PROCUREMENT								•								-				
Quantity	3020		4744		3284		8730	_	19636							- 0	10133	4	49547	
Installation Kits																				
Installation Kits Nonrecurring			-							•										
Equipment		0.755		1.186		0.903		2.401	u)	5.400							- 2	2.800		13.445
Equipment Nonrecurring											_									
Engineering Support		0.075		0.140		0.139	_	0.138		0.115							- C	0.110		0.717
Testing		0.050		0.050		0.050		0.050	_	0.050							- o	0.050		0.300
Integrated Logistical Support		0.010		0.020		0.020		0.020		0.020								0.020	-	0 110
Fielding		0.010		0.020		0.020		0.020	_	0.020							- C	0.020		0.110
Other						•)
Interim Contractor Support				-									-							
Installation of Hardware																				
FY 1996 & Prior Eapt Kits			3020															_		
FY 1997 Eapt Kits			752		3000			*										_	3020	
EV 1008 East - Kits			1		7 60														4/44	
1 1990 Edpt - Nils				-	3284		-		a										3284	
FY 2000 Fapt Kits							9/30	-	0000	·						***	•	- ;	8730	
FY 2001 Eqpt kits	-								9030									=	19636	
FY 2002 Eqpt kits																				
FY 2003 Eqpt kits							······································													
(FY(TC) Eqpt (xx kits)		1		1	\dashv	+		\dashv	-		\dashv	\dashv			-	10133	33	7	10133	
Total Installation Cost		1	3772		7276		8730		19636		-					10133	33	46	49547	
Total Procurement Cost		0.900		1.416	_	1.132	2	2.629	2	5.605	\dashv	_	-	-	\dashv	4	e,	3.000		14.682
MPLEMEN	Unit Ap	plication	_	•	DMINIS	TRATIV	ADMINISTRATIVE LEADTIME	TIME		1 Mo	Months	Д.	PRODUCTION LEADTIME:	ION LE	ADTIME	::: 52	Months	ths		
Contract Dates: Aug-96 Delivery Date: Dec-96		FY 1997: FY 1997:				ŒŒ	FY 1998: FY 1998:					<u></u>	FY 1999: FY 1999:							

Installation Schedule:		Close Combat Optics (M4 Carbine) TBD	Optics ((M4 Cg	trbine)	TBD1							Date		Ē	February 1997	<u></u>				
	FY 1996	FY 1997			FY 1998	96		Ŧ	FY 1999			FY 2000			FY 2001	100					,
	& Prior 1	QI	8	-	СI	m	4 1	ΟI	က	41	=	(N	41	-1	OI	(C)	41				Total
Inputs																					
FY 1996 & Prior																					
FY 1997																					
FY 1998																					
FY 1999																					
Outputs																					
FY 1996 & Prior																					
FY 1997																					
FY 1998																					
FY 1999																					
		FY 2000			FY 2001			FY 2002	302		Ľ.	FY 2003			FY 2004	4		FY	FY 2005		
		2	က	4	N	က	4	+	2 3	4	-	٥ı	3	4	Ø	က	4	-	2 3	4	Total
Inputs																					
FY 2000																					
FY 2001																					
FY 2002																					
FY 2003																					
Outputs																					
FY 2000																					
FY 2001																					•
FY 2002																					
FY 2003																					
Remarks:	The installation schedule is not required for this modification.	n schedule	is not re	quired fc	or this mov	dification															

	INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	M203 for M4 Carbine TBD2			
MODELS OF SYSTEMS AFFECTED:	M4 Carbine, M4A1			
DESCRIPTION / III STIFICATION				
The Army units assigned the M	The Army units assigned the M4 Carbine will obtain the capability to fire the M203 Grenade Launcher (GL) with the M4 Carbine.	3 Grenade Launcher (Gl	_) with the M4 Carbine.	
DEVEL OPMENT STATIS / MA 100 DEVEL OBMENT WILESTONIES.	VEI ODMENT MII EGTONICO.			
		PLANNED	ACCOMPLISHED	
Developmental/Operational Tests	nal Tests		1097	
Type Classification/Milestone III	tone III	2097		
Production Contract Award		3Q97	,	
First Production Hardware Delivered	re Delivered	4Q97		
First Unit Equipped		4097		

				INDI	VIDUAL	INDIVIDUAL MODIFICATION	SATION							Date		February 1997	16	
MODIFICATION TITLE (Cont):	Σ	M203 for M4		Carbine TBD2	, TBDį													
FINANCIAL PLAN: (\$ in Millions)	77. 4000																	
	and Prior	FY 1997	766	FY 18	86	FY 1999	F	FY 2000	Ē	FY 2001	FY2	FY 2002	FY 2003	503	TC	-	TOTAL	
	Oty \$	Qfy	\$	Oty \$	\$	Of Of	Н	Oty \$	ð	8	ğ	ક	δ	ક	οίγ	О \$	δį	↔
RDT&E	0.631																	0.631
PROCUREMENT														•				
Quantity	,	1942															1942	
Installation Kits								-										
Installation Kits Nonrecurring	_		•					-										
Equipment			0.160										•					0.160
Equipment Nonrecurring																		
Engineering Support			0.070															0.070
Testing																		
Integrated Logistical Support			0.040	W * **														0.040
Fielding			0.030													_		0.030
Other																		
Interim Contractor Support						-												
Installation of Hardware																		
FY 1996 & Prior Eqpt Kits														•				
FY 1997 Eqpt Kits		1500		442												•	1942	
FY 1998 Eqpt Kits							····											
FY 1999 Eqpt Kits																	-	
FY 2000 Eqpt kits							_											
FY 2001 Eqpt kits																		
FY 2002 Eqpt kits																		
FY 2003 Eqpt kits	-																	
(FY(TC) Eqpt (xx kits)																		
Total Installation Cost		1500		442													1942	
Total Procurement Cost			0.300		\dashv	_	\dashv	-	\dashv									0.300
METHOD OF IMPLEMENTATION: Unit Application	: Unit Application		Anr 07	ADMINE	STRATI	ADMINISTRATIVE LEADTIME:	TIME:	6	Months	lhs	PRODUC	UCTION 9:	PRODUCTION LEADTIME:	ΨË	4 Mor	Months		
Contract Dates: Delivery Date:	FY 1997:		Jul-97		_ 11	FY 1998:					FY 1999:	i iii						
]

FY 1986 FY 1987 FY 1987 FY 1986 FY 1986 FY 1988 FY 2000 FY 2	Installation Schedule:	M203 for M4 Carbine TBD2
8 Prior 8. Prior 1. 2. 3. 4.		FY 1997 FY 1998 FY 1999 FY 2000 FY
8 Prior 1 2 3 4 1 2 3		1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
8 Prior EY 2000 FY 2001 FY 2002 FY 2004 FY 2005 FY 2004 FY 2005 The installation schedule is not required for this modification.	Inputs	
8 Prior FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3	FY 1996 & Prior	
8 Phor FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4	FY 1997	
8 Prior FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3	FY 1998	
8 Prior FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3	FY 1999	
8 Phor FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1	Outputs	
FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 1 2 3 4	FY 1996 & Prior	
FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3	FY 1997	
FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 3 3 4 3 3 4 3 3 3 4 3 3 3 4 3	FY 1998	
FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3	FY 1999	
1 2 3 4 1 3 4 1 3 4		FY 2001 FY 2002 FY 2003 FY 2004
The Installation schedule is not required for this modification.		2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
)	Inputs	
	FY 2000	
ļ.,	FY 2001	
)	FY 2002	
ļ.,	FY 2003	
	Outputs	
	FY 2000	
	FY 2001	
	FY 2002	
	FY 2003	
	Remarks:	The Installation schedule is not required for this modification.



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Modifica	
ndividual I	
bit P-3a Ir	
EXP	

	INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	Modular Weapon System (M4 Carbine) TBD3			
MODELS OF SYSTEMS AFFECTED:	Carbine, 5.56 M4			
DESCRIPTION / JUSTIFICATION:				
The modular weapon is a no tool, field expedient a of M4 Carbines with ancillary items such as optics,	The modular weapon is a no tool, field expedient applied system of mounting rails/methods to allow the custom configuration of M4 Carbines with ancillary items such as optics, night sights, IR laser pointers, the grenade launcher, back-up sights, etc.,	s/methods to allow the cus the grenade launcher, ba	stom configuration ck-up sights, etc.,	
pased upon mission requirements.				
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTON	VELOPMENT MILESTONES:	PLANNED	ACCOMPLISHED	
Developmental/Operational Tests	nal Tests		3/4Q95	
Milestone III Production Decision	Decision	2097		
Production Contract Award	ונק	3097		-
First Production Hardware Delivered	e Delivered	3098		
First Unit Equipped		4098		

					QNI	IVIDUA	INDIVIDUAL MODIFICATION	-ICATIC	N.						Date		١	February 1997	
MODIFICATION TITLE (Cont):		≥	lodula	r Weap	on Sy	stem ((M4 C	arbine	Modular Weapon System (M4 Carbine) TBD3									oci di in	
FINANCIAL PLAN: (\$ in Millions)																			
	FY 1996	966																	
	Oty \$	S	74 1997	/66 8	<u> </u>	1998	FY 1999	666	FY 2000	╁	FY 2001		7200	1	200	\vdash	ဍ		OTAL
RDT&E		1.158	1			,	3	•	+	+	<u> </u>	+	<u> </u>	3	A E	3	<i>*</i>	ð	-
PROCUREMENT																			1.158
Quantity			1000		953		3066									14981	81	20000	
Installation Kits					_											<u>:</u> —-			
Installation Kits Nonrecurring																			
Equipment				0.280		0.276		0.886									4 400		C 10 A 2
Equipment Nonrecurring																	f 		š
Engineering Support				0.058		0.050		0.075									0 150		
Testing				0.020			-										<u>-</u>		0.000
Integrated Logistical Support				0.015		0.011		0.030									0.005	- ŭ	0.020
Fletding				0.025		0.033	_	0.098									0.000	? 5	0.00
Other			-																
Interim Contractor Support																-			· · · · · · · · · · · · · · · · · · ·
	-																		
Installation of Hardware																			
FY 1996 & Prior Eqpt Kits																			
FY 1997 Eqpt Kits					1000														
FY 1998 Eqpt Kits		_			953			 -										000) e
FY 1999 Eqpt Kits							3066						-					3000	
FY 2000 Eqpt kits									 .									3	
FY 2001 Eqpt kits									_										
FY 2002 Eqpt kits						-			· · · · · ·	_									,
FY 2003 Eqpt kits														-					
(FY(TC) Eqpt (xx kits)																14981	=	14981	
Total Installation Cost	1	1			1953		3066	-								14981	=	20000	0
Total Procurement Cost			1	0.398		0.370		1.089							$\left \cdot \right $		4.855		6.712
METHOD OF IMPLEMENTATION: Unit Application	Unit App	lication			DMINIS	TRATIV	DMINISTRATIVE LEADTIME:	TIME	9	Months	ths	Ä	PRODUCTION LEADTIME:	ON LEA	DTIME	42	Months	₆	
Contract Dates: Delivery Date:	LiL	FY 1997: FY 1997:		May-97 Apr-98		LLĹ	FY 1998: FY 1998:					<u>}</u>	FY 1999: FY 1999:						
																İ			

Installation Schoolule:	1	Modular Weapon System (M4 Carbine)	2/8/ 05	tom (A	14 Ca	rhine)	TRD3							Date		l E	February 1997	260					
	6	FY 1997	,	-		FY 1998			FY 1999	666		_	FY 2000			F.	FY 2001						
	& Prior 1	C)	ත (න	4	QI.	ଠା	4 1	н	QI	rol	41	H	SI	41	7	C)	ଜା	41				Ħ	Total
Inputs																							
1 1990 & PIIO																							
FY 1997																							
FY 1998																							
FY 1999																							
Outputs																							
FY 1996 & Prior			٠																				
FY 1997																							
FY 1998																							
FY 1999																							
		FY 2000			FY 2001	100			FY 2002	Ñ		Ŧ	FY 2003			FY 2004	04			FY 2005			
	-	Ø	က	4	-	7	3	-	Ø	က	4	-	2	ဗ	4	1 2	б	4	-	N	ო	4 Total	Cotal
Inputs																							
FY 2000																							
FY 2001																							
FY 2002																							
FY 2003																							
Outputs																							
FY 2000																							
FY 2001																							
FY 2002																							
FY 2003																							
Remarks:	The installation schedule is not required for this modification.	n schedul	le is not	requirec	for this	modific	ation.																

	INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	M4 Improved Buttstock TBD4			
MODELS OF SYSTEMS AFFECTED:	M4 Carbine, M4A1			
DESCRIPTION / JUSTIFICATION:				
The M4 Improved Buttstock pr stock/cheek weld.	The M4 Improved Buttstock provides the rifleman with features for obtaining the proper shooting form; stock/shoulder weld and stock/cheek weld.	oper shooting form; stock/sl	houlder weld and	
This program provides the rifle	This program provides the rifleman with an ergonomically optimized buttstock for the M4 Carbine.	ne M4 Carbine.		
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTO	/ELOPMENT MILESTONES:			
		PLANNED	ACCOMPLISHED	
Milestone III		3097		
Engineering Change Proposal	nosal ,	1098		
First Production Hardware Delivered) Delivered	3098		
First Unit Equipped/Materiel Work Order		4098		

iffication

					<u>Q</u>	VIDUAL	MODIF	INDIVIDUAL MODIFICATION	z						Date		Fe	February 1997		٦
MODIFICATION TITLE (Cont):		M4	Impr	oved	M4 Improved Buttstock TBD4	ck TB	04													
FINANCIAL PLAN: (\$ in Millions)																				
	FY 1996 and Prior	_L g	FY 1997	797	FY 1998	86	FY 1999	66	FY 2000	8	FY 2001	-	FY 2002	-	FY 2003	-	2		TOTAL	
	ð	69	हे	မာ	ð	89	È	╁	₹	H	Qty		Oty \$	3	k \$	Qty	1 1	Qt		8
RDT&E	-	0.377	-																0	0.377
PROCUREMENT																				
Quantity					10,000		37,300								-			47,300	0	
Installation Kits																				
Installation Kits Nonrecurring					•													-		
Equipment		_				0.400		1.500											-	1.900
Equipment Nonrecurring																				
Engineering Support						0.150		0.100		-									o —	0.250
Testing		,							-											
Integrated Logistical Support						0.100									- 4-				о —	0.100
Fielding								·												
Other													· ·							
Interim Contractor Support																				
								·		<u> </u>		-								
Installation of Hardware																	· · · ·			-,,
FY 1996 & Prior Eqpt Kits																				
FY 1997 Eqpt Kits																				
FY 1998 Eqpt Kits					10,000										· · · -			10,000	8	
FY 1999 Eqpt Kits						•	37,300		•					٠,				37,300	00	
FY 2000 Eqpt kits																				
FY 2001 Eqpt kits											••									
FY 2002 Eqpt kits											·,-		-				-		-	•
FY 2003 Eqpt kits																				
(FY(TC) Eqpt (xx kits)									-			-	-	\dashv	+					
Total Installation Cost					10,000		37,300					\dashv		4	-	4		47,300	8	
Total Procurement Cost						0.650		1.600			\dashv	-	-		-	-	_	\downarrow	5	2.250
METHOD OF IMPLEMENTATION: Unit Application Contract Dates:	4: Unit App	polication FY 1997:			ADMIN	ADMINISTRATIVE LEADTIME: FY 1998:	IVE LEAI FY 1998:	DTIME:	J	1 Months Oct-97	onths	<u> </u>	PRODUCTION LEADTIME: FY 1999:	ION LE	ADTIME	<u>۷</u>	Months	lls L		
Delivery Date:	Ĺ	FY 1997:				u	FY 1998:		4	Apr-98		Ĺ	FY 1999:							
																				İ

Installation Schedule:	i	mpro	M4 Improved Buttstock TBD4	Ittstoc	ž TBĽ	7										Date		Feb	February 1997						
	FY 1996		FY 1997				FY 1998			Ε	FY 1999			FY 2000	00			FY 2001	5						
	& Prior	-	2	41	-	C/I	മ	₹i	-	₽	က	41	- -i	α	m	41		Q	m	41				_	Total
Inputs																								1	
FY 1996 & Prior																									
FY 1997																									
FY 1998																									
FY 1999																									
																									•••
Outputs																									
FY 1996 & Prior																									-
FY 1997																									
FY 1998	-																								
FY 1999																									
		Ŧ	FY 2000			FY 2001	1001			FY 2002	Ŋ		ш	FY 2003			L.	FY 2004			Ĺ	FY 2005			
		_	8	က	4	-	Q	3 4	-	8	က	4	-	8	က	4	-	8	ო	4		0	က	4	Total
Inputs																								!	
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Remarks:	The installation schedule is not required for this modification.	ation so	shedule i	s not re	quired	for this	modifica	ıtlon.																	



						DATE		
	BUC	BUDGET ITEM JUSTIFICATION SHEET	TIFICATION SH	EET		February 1997		
APPROPRIATION / BUDGET ACTIVITY	YTIVI			P-1 ITEM NOMENCLATURE				
PROCUREMENT OF	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	HS Meapons and Other Co	mbat Vehicles			MEDIUM MACHINE GL	MEDIUM MACHINE GUNS (MODS) (GZ1300)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	6.3	0.0	0.0	0:0	0.0	0.0	0.0	0.0

DESCRIPTION: The M240B, 7.62mm Machine Gun is the ground mounted version of the basic M240 Armor Machine Gun. An initial procurement will utilize government owned M240 assets converted to M240B ground mounted machine guns. The conversion requires the installation of a buttstock, front and rear sights, bipod legs, a barrel change handle, heatshield, replacement of the top feed cover, the pistol grip with trigger mechanism and charging handle. Also minor machining of the operating rod is required. Extensive operational and technical testing has demonstrated exceptionally high reliability for this weapon system.

competitive technical and operational testing of the M240B and an improved M60 model machine gun, the Army selected the M240B to satisfy its JUSTIFICATION: The US Army established a requirement for an 7.62mm medium machine gun with improved reliability. Following extensive 7.62mm medium gun requirement.

	DATE	
BUDGET ITEM JUSTIFICATION SHEET	ET February 1997	
APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE	
PROCUREMENT OF WPNS & TRKD CMBT VEHS AWeapons and Other Combat Vehicles	MEDIUM MACHINE GUNS (MODS) (GZ1300)	(MODS) (GZ1300)

2002 FY 2003		
I FY 2002		
FY 2001	0.0	0.0
FY 2000	0.0	0.0
FY 1999	0.0	0.0
FY 1998	0.0	0.0
FY 1997	Upgrade Kits 0.0	0.0
All PYs FY 1997	dium Machine Gur 6.3	6.3
	į	
Classification	TBD1 Operational	Totals



	Ź	MODIFICATION INSTALLATION SUMMAR Date	NTION IN	STALLA	TION S	UMMAR	Date	Fohmen 1997	7.0
			(TOA, Dollars in Millions)	ollars in I	Millions)	- J		reducing 19	
	젎							-	
System/Modification	FY 1996	FY 1997	FY 1998	FY 1999	EY 2000	EY 2001	EY 2002	EX 2003	TOTAL
No P3a Set for modification MEDIUM MACHINE GUNS (MODS) GZ1300 Medium Machine Gun Upgrade Kits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

	INDIVIDUAL MODIFICATION Date	February 1997
MODIFICATION TITLE: Medium	Medium Machine Gun Upgrade Kits TBD1	
MODELS OF SYSTEMS AFFECTED: M240, 7.62mr M122 Tripod	M240, 7.62mm Machine Gun M122 Tripod	
DESCRIPTION / JUSTIFICATION:		

DESCRIPTION: The M240B, 7.62mm Machine Gun is the ground mounted version of the basic M240 Armor Machine Gun. An initial procurement front and rear sights, bipod legs, a barrel change handle, heatshield, replacement of the top feed cover, the pistol grip with trigger mechanism and will utilize government-owned M240 assets converted to ground mounted machine guns. The conversion requires the installation of a buttstock, charging handle. Also minor machining of the operating rod is required. Extensive operational and technical testing has demonstrated exceptionally high reliability for this weapon system.

competitive technical and operational testing of the M240B and an improved M60 model machine gun, the Army selected the M240B to satisfy its JUSTIFICATION: The US Army established a requirement for an 7.62mm medium machine gun with improved reliability. Following extensive 7.62mm medium aun reauirement.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	PLANNED ACCOM	ACCOMPLISHED
Development Test and Evaluation	4095	
Initial Operational Test and Evaluation	3095	
Type Classification	3096	
Production Contract Award	3096	
First Production Hardware Delivered	2097	
First Unit Equipped	4097	

				INDI	/IDUAL	INDIVIDUAL MODIFICATION	TION						Date		Febru	February 1997	
MODIFICATION TITLE (Cont):	4	Aediun	Macf	iine Gui	υpgr	Medium Machine Gun Upgrade Kits TBD1	ТВО1										
FINANCIAL PLAN: (\$ in Millions)	FV 4006	,															
	and Prior	FY 1997	766	FY 1998	38	FY 1999	FY 2	FY 2000	FY 2	FY 2001	FY 2002	72	FY 2003		2	TOTAL	AL
	Cty \$	άg	\$	Qty	\$	City \$	Qty	\$	Qty	\$	Qty	Н	Oty \$	αţ	\$	Qty	\$
RDT&E	1.902																1.902
PROCUREMENT																	
Kit Quantity	1200															1200	
Installation Kits																	
Installation Kits Nonrecurring																	
Equipment	4.725																4.725
Equipment Nonrecurring																	
Engineering Support	0.350	_															0.350
Testing	0.250					·											0.250
Integrated Logistic Support	0.050																0.050
Fielding	0.326																0.326
Other - Engineering Studies	0.591															-	0.591
Interim Contractor Support					·												
	<u> </u>					*******						-					
Installation of Hardware																	
FY 1996 & Prior Eqpt Kits		1200														1200	
FY 1997 Eqpt Kits	•					_										****	
FY 1998 Eqpt Kits																	
FY 1999 Eqpt Kits												_					
FY 2000 Eqpt kits																	
FY 2001 Eqpt kits																	
FY 2002 Eqpt kits																	
FY 2003 Eqpt kits																	
(FY(TC) Eqpt (xx kits)																	
Total Installation Cost		1200			_									_		1200	
Total Procurement Cost	6.292				_			_]				\dashv					6.292
						i	ļ	•	:			į	1	(:		
MPLEME	: Contractor	í		AUMINIO	Z (ADMINISTRATIVE LEADTIME:	ij K	9	Months		PHODUC	I ON I	PHODUCTION LEADTIME:	ກ	Months		
.; ∑	FY 1997:	: £			Lί	FY 1998:					FY 1999:						
Delivery Date: Jan-97	FY 1997:	17:			L	1998:					FY 1999:						



			DATE				
33	CODE "B" ITEM DES	M DESCRIPTION	February 1997	y 1997	REPOI	REPORT CONTROL SYMBOL DD-COMP(AR)1092	BOL
APPROPRIATION		ACTIVITY	P-1 ITEM NOMENCLATURE	LATURE			
PROCUREMENT OF WPNS & TRKD CMBT VEHS	TRKD CMBT VEHS	Weapons and Other Combat Vehicles		MEDIUM MAC	MEDIUM MACHINE GUNS (MODS) (GZ1300)	S) (GZ1300)	
1. CURRENT DEVELOPMENT AND TEST STATUS	STATUS						
					SCHEDULE DATE		
			CURRENT	LAST RPTD	F	REASON FOR DELAY*	
			(1)	(2)		(3)	
a. DEV TEST & EVAL (DT&E)		PLAN / ACTUAL	Aug-95				
b. INITIAL OPER TEST & EVAL (IOT&E)		PLAN / ACTUAL	May-95				
c. OPER TEST & EVAL (OT&E)		PLAN / ACTUAL	N/A				
d. AVAIL DATE OF TECH DATA PKG (TDP)							
OR PERFORMANCE SPECIFICATIONS							
2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE	SERVICE USE	3Q96					
3. EQUIPMENT ITEM(S) TO BE REPLACED M60, 7.62mm Machine Gun in certain ground mounted roles	b rtain ground mounted role	Şı	:		:		
4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT Reliability increase of 100% minimum with a goal of		TO BE REPLACED 300%					
5. DEVELOPMENT CONTRACT INFORMATION	TION						
CONTRACTOR NAME	PLANT LOCATION (2)	COMPONENT (3)	THROUGH 1996 (4)	1997 (5)	1998	1999 (7)	BEYOND BYs (8)
FABRIQUE NATIONAL	Columbia, SC	M240 Machine Gun Upgrade	0.130				
SACO Defense Inc.	Saco, Me	M60 Machine Gun Upgrade	0.260				
TOTAL BUTTE ELINDING			0.390	0000	0000	000 0	0000
IOIAL HDIGE FOIDING			0.990	0000	0000	0000	0000
* Reference entries on attachment to P-19 if	additional space is required to a	 Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date. 					

Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date.

						DATE		
	BUL	BUDGET ITEM JUSTI	TIFICATION SHEET	leet			February 1997	
APPROPRIATION / BUDGET ACTIVITY	וועודץ			P-1 ITEM NOMENCLATURE	m			
PROCUREMENT OF	WPNS & TRKD CMBT VE	PROCUREMENT OF WPNS & TRKD CMBT VEHS / Weapons and Other Combat Vehicles	ombat Vehicles			M119 MODIFICA	M119 MODIFICATIONS (GC0401)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	0.0	0.0	5.0	5.0	5.0	5.0	5.0	5.0

DESCRIPTION: Light Artillery System Improvement Plan (LASIP) for the 105mm, M119A1 Light, Towed Howitzer

maintainability (RAM), and providing solutions to requests for minor operational enhancements. The LASIP was developed by the M119A1 Howitzer Improvement Team (HIT), chartered specifically to respond to improvements requested by field artillery units, the U.S. Army Field Artillery School The Light Artillery System Improvement Plan (LASIP) initiates this process by correcting known deficiencies, improving reliability, availability and nondevelopmental item (NDI) with growth potential. Now that 413 M119A1 howitzers have been fielded, it is time to realize that growth potential. JUSTIFICATION: The 105mm M119A1 Light, Towed Howitzer was selected as the weapon of choice for the light forces because it was a (USAFAS) and the U.S. Army Training and Doctrine Command (TRADOC).

	0	DATE
BUDGET ITEM JUSTIFICATION SHEET	EET	February 1997
APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE	
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles		M119 MODIFICATIONS (GC0401)

OSIP No.	Description							
ssification	Ali PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
TBD1 Operational	Block 1 Upgrade 0.0	0.0	5.0	5.0	5.0	0.2	0.0	0.0
TBD2 Operational	Block 2 Upgrade 0.0	0.0	0.0	0.0	0.0	4.8	5.0	5.0
Totals	0.0	0.0	5.0	5.0	5.0	5.0	5.0	5.0
,								
								-

	MODIFICATION INSTALLATION SOMIMARY	I ALLA I		MWAH 1			Date	February 1997	997
			TOA, Do	ollars in	(TOA, Dollars in Millions)				
	ž								
System/Modification	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
No P3a Set for modification M119 MODIFICATIONS GC0401									
Block 1 Upgrade	0.0		0.0	0.7	0.2	0.2	0.0		7
Block 2 Upgrade	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.7
Totals	0.0	0.0	0.0	0.7	0.2	0.2	0.4	0.3	1.9

	NOTE STREET	cted	Cohman 1997
			redidary 1997
MODIFICATION TITLE:	Block 1 Upgrade TBD1		
MODELS OF SYSTEMS AFFECTED:	Howitzer, Light Towed, 105mm M119A1 (Mod)		

DESCRIPTION / JUSTIFICATION:

clearances for the clevis pins on the rear firing stays of the firing platform make it very difficult to attach the stays to the trail during emplacement. systems when Operational Mode Profile (OMP) is factored in. Upgrade Cam Follower Arm; Preventing damage to the cam follower will improve reliability, availability and maintainability while reducing Operating and Support costs (OSCR). Improve Firing Stays; The design and mounting Upgrade M187 1-94-05-7911; The M119A1 indirect fire control system fails approximately 14 times more often than other hardware fire control Retrofit Low Temp Recuperator 1-90-05-7875; The seals function only to temperature of -25F not the -50F. Improve Indirect Fire control; attach the stays to the trail when preparing for towing Redesign Rammer/Extractor Tool; The rammer/extractor tool currently issued was "borrowed" from the M102 Howitzer which required the base of the primed cartridge be forcefully struck by a hard rubber plunger. Improve Traveling Stays; The design and mounting clearances for the clevis pins on the traveling stays make it very difficult to

	PLANNED ACCOMPLISHED 3Q90	3091	3092	1093	2098	1099	2099	2001	3001
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	Validate Materiel change (MC)	Critical Design Review:	Complete testing of Prototype	Release Technical Data Package (TDP)	Award Contract for Modification (MOD) Kits	Deliver First Mod Kit	First Unit Equipped (FUE)	Deliver Last Mod Kit	l set Linit Fairlined

					<u>N</u>	IVIDUA	L MODI	INDIVIDUAL MODIFICATION	Z						ľ	Date		February 1997	ry 1997	Γ
MODIFICATION TITLE (Cont):		面	Block 1 Upgrad	Upgra	ide TBD1	10														
FINANCIAL PLAN: (\$ in Millions)	EV 1996	٣																		
	and Prior	 	FY 1997	997	FY 1998	866	FY 1999	666	FY 2000	000	FY 2001	50	FY 2002	20	FY 2003	03	70		TOTAL	بر
1	ğ	89	ğ	€9	ð	69	ð	€9	ğ	\$	ŧ	69	È	\$	₹	╁	Ą	\$	È	s
RDT&E									-							-				
PROCUREMENT																				
Kit Quantity					140		140		145										425	
Installation Kits	-																			
Installation Kits Nonrecurring																				
Equipment						4.2		3.4		3.9									-	11.5
Equipment Nonrecurring	<u> </u>		-,			0.0		0.0		0.0										0.0
Engineering Change Orders						0.2		0.1		0.0										0.3
Engineer Support						0.3		0.5		0.5										1.3
Other						0.2		0.3		0.3										0.8
Testing						0.0				0.0										0.1
Fielding						0.0		0.0		0.0							•			0.0
Interim Contractor Support							- 12											,		
Installation of Hardware																-	·····			
FY 1996 & Prior Eqpt Kits																	-			
FY 1997 Eqpt Kits																				
FY 1998 Eqpt Kits	_						140	0.7											140	0.7
FY 1999 Eqpt Kits							22	0.0	118	0.2									140	0.2
FY 2000 Eqpt kits									4	0.1	101	0.2		-					145	0.2
FY 2001 Eqpt kits									 -											
FY 2002 Eqpt kits																				
FY 2003 Eqpt kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost		-					162	0.7	162	0.2	101	0.2				_			425	1.1
Total Procurement Cost						5.0		5.0		5.0		0.2								15.1
METHOD OF IMPLEMENTATION: Unit Application Contract Dates: FY 1997:	Unit App FY	Application FY 1997:		A Multiple	ADMINISTRATIVE LEADTIME: PY 1998:	STRATI	IVE LEAU FY 1998:	DTIME:	2	6 N Multiple	Months	<u> </u>	PRODUC FY 1999:	CTION	PRODUCTION LEADTIME: FY 1999: Multiple	OTIME: Multiple	2	Months		
Delivery Date:	Ŧ	FY 1997:		Multiple		_	FY 1998:		2	Multiple		ш	FY 1999:		M	Multiple				
																				1

Installation Schedule:	1	ɔ̈́	Block 1 Upgrade TBD1	185	٦												Date		Feb	February 1997	*					
Ē	5		FY 1997	_			FY 1998	86			FY 1999	66			FY 2000	00			FY 2001	100						
•	& Prior 1		C#		41	7	01	(C)	41	-	01	m	41	-	01	mi	41	+	αı	ы	41				•	Total
FY 1996 & Prior																										
FY 1997																										
FY 1998										32	32	32	32													140
FY 1999													22	99	99	99	78		-							140
Outputs																										
EV 1996 & Prior																										
TV 4007																										
FT 1997											33	35	35	35												140
0881 1											3	3	3	3 3		ć	ć	8								7,
FY 1999														22	30	ဓ	ဓ	28								140
		Ŧ	FY 2000			Ĺ	FY 2001			ĹL	FY 2002			ı	FY 2003	~			FY 2004			ıL.	FY 2005			
		-	Ø	ဇ	4	-	N	က	4	-	01	က	4	-	α	ဗ	4	-	8	က	4	-	8	က	4	Total
Inputs																										
FY 2000				22	22	20	51																			145
FY 2001																										
FY 2002																										
FY 2003																										
Outputs																		٧,								
FY 2000					22	22	20	51										÷								145
FY 2001																										
FY 2002																										
FY 2003		·																								
Remarks:																										
Multiple contract and delivery dates indicated on page 4 are the result of unknown multiple contractors at this time.	Jelivery dat	tes ind	licated o	n page	4 are	the res	sult of L	Inknow	n multip	le conti	actors	at this	ime.													
When contractors are chosen and delivery dates are set, P-Forms will be updated as needed.	chosen an	d deli∖	/ery date	s are	set, P-I	-orms	will be	update	das ne	eded.																

	INDIVIDUAL MODIFICATION	Date	February 1997
MODIFICATION TITLE:	Block 2 Upgrade TBD2		
MODELS OF SYSTEMS AFFECTED:	Howitzer Light Towed, 105mm, M119A1 (Mod)		
DESCRIPTION / JUSTIFICATION:			

Brake system; The system required a special production run by the British manufacturer. The brakes also use asbestos brake linings and require Improve Adjustable connecting Rod; The current design suffers from water entrapment which leads to corrosion and binding of the spring. Modify cross country movement and is highly susceptible to damage during tactical operations. Modify firing Platform; The position makes deployment a collar to lock out the lunette when backing up. Upgrade Elevating Handwheel; It is the limiting factor in the system's departure angle during Due to limited clearance, the user has requested trail lifting handles to design. Improve Direct Fire Scope; Improving the direct fire scope will of the howitzer difficult, as the firing platform must be disengaged from its stowage brackets, lifted manually from the trail, carried completely clear of the trail and placed on the ground before the howitzer can be rolled into its firing position. Add Trail Lifting Handles; provide night capability. Improved accuracy and internal boresighting.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:		
Validate Materiel Change (MC)	FLANNED	ACCOMPLISHED 3Q94
Critical Design Review:	1098	
Complete testing of Prototype	2098	
Release Technical Data Package (TDP)	4Q98	
Award Contract for Modification (MOD) Kits	1Q99	
Deliver First Mod Kit	1002	
First Unit Equipped (FUE)	2002	
Deliver Last Mod Kit	2004	
Last Unit Equipped	3004	

Modification	
Individual	
Exhibit P-3a	

				2	VIDUAL	MODIF	INDIVIDUAL MODIFICATION							Date		Februa	February 1997	
MODIFICATION TITLE (Cont):		Slock 2	Block 2 Upgra	ide TBD2	22													
FINANCIAL PLAN: (\$ in Millions)		-																
	FY 1996 and Prior	Ā	FY 1997	FY 1998	866	FY 1999	66	FY 2000	_	FY 2001	<u>F</u>	FY 2002	FY 2003	003	15		TOTAL	A.
1	Oty \$	ģ	\$	Qty	\$	Qty	\vdash	Qty		ty \$	ģ	\$	Qfy	\$	Qt	\$	Oţ.	\$
RDT&E																		
PROCUREMENT																		
Kit Quantity										140	140	_	145				425	
Installation Kits																		
Installation Kits Nonrecurring	,																	
Equipment										<u>е</u>	3.9	3.8	**	3.6				11.3
Equipment Nonrecurring	•									_	0.1	0.0		0.0			,	0.2
Engineering Change Orders										_	0.1	0.1		0.2		•		0.3
Engineering Support										_	0.4	0.5		0.8				1.7
Other									nan-r	_	0.2	0.2		0.1				0.5
Testing										_	0.0	0.0		0.0				0.0
Fielding										_	0.0	0.0		0.0				0.0
Interim Contractor Support																		
								 								•		
Installation of Hardware																		
FY 1996 & Prior Eqpt Kits										-								
FY 1997 Eqpt Kits										····								
FY 1998 Eqpt Kits									_							•		
FY 1999 Eqpt Kits																•		
FY 2000 Eqpt kits																		
FY 2001 Eqpt kits											140						140	0.3
FY 2002 Eqpt kits											55	2 0.0	118	0.2			140	0.3
FY 2003 Eqpt kits													4	<u>.</u>	5	0.3	145	0.4
(FY(TC) Eqpt (xx kits)																		
Total Installation Cost											162	2 0.4	162	0.3	101	0.3	425	1.0
Total Procurement Cost										4	4.8	5.0		5.0		0.3		15.0
					i	1				1	0		i i	į				
METHOD OF IMPLEMENTATION: Unit Application	Unit Abbilcation EV 1997:	lion 7.	Mulliple	ACMIN	ADMINISTRATIVE LEADTIME:	IVE LEAI FV 1998:	D IN	Ž	o Moi	Monins	FY 1999		. ¥	Multiple	0	MODELIS		
Collinati Dates.	FY 1997:	<u>.</u>	Multiple	· •	. u.	FY 1998;		Ź	Multiple		FY 1999:		2	Multiple				
College Caro.			-											-				

Installation Schedule:	e: Block 2 Upgrade TBD2	Upgrad	e TBD	0										Ş			1	190				
	9	FY 1997		l	Ā	FY 1998			EV 1000	000			V 2000			L	rebluary 1987) 1981 K				
	& Prior 1	C)	. დ	_			4	-	<u>:</u>	g e	4	-	מאלו ל		•		ž					İ
Inputs						ſ	1	1	d	K	1			H K) ()	# i				Total
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
	ш	FY 2000			FY 2001	5		-	FY 2002			Ŧ	FY 2003			FY 2	FY 2004			FY 2005		
	-	0	က	4	1 2	e	4	-	8	ო	4	_	Ø	ဗ	4	-	Ø	8	4	~	œ	4 Total
Inputs																				ı)	
FY 2000																						
FY 2001								32	35	32	32											•
FY 2002											8	30	30	30	% %							7
FY 2003																50 5	10					- +
																	-					_
Outputs																						
FY 2000																						
FY 2001									35	32	32	35										+
FY 2002													8	30	30	28						1 1
FY 2003	•			İ													50 51	-				140
Remarks:																						

Multiple contract and delivery dates indicated on page 7 are the result of unknown multiple contractors at this time. When contractors are chosen and delivery dates are set, P-Forms will be updated as needed.



						DATE		
	BNB	BUDGET ITEM JUS	ISTIFICATION SHEET	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	YIIV			P-1 ITEM NOMENCLATURE	ııı			
PROCUREMENT OF	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other	4S /Weapons and Other Co	Combat Vehicles			M16 RIFLE MODS (GZ2800))DS (GZ2800)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	2.8	5.5	7.6	7.1	0.0	0.0	0.0	0.0

M16A2 Rifle. The modular weapon allows the custom configuration of the M16 rifles with accessories and smaller items. i.e. optics, night sights, 30 round aluminum magazine. The M16 Rifle Modifications Program provides a close combat optic and a modular weapon system suite for the DESCRIPTION: The M16 family of rifles is a gas operated, magazine fed, selective rate and shoulder fired weapon. It is fed by a laser pointers, based on mission requirements. JUSTIFICATION: The close combat optic allows the soldier to fire a weapon with both eyes open allowing greater awareness of events happening in close proximity and improves hit probability in daylight, low light level, wet weather and other adverse conditions. The modular weapon system is a key component of Land Warrior Lethality and allows the combat commander to custom configure weapons based upon the mission.

	DATE	
BUDGEL LIEM JUSTIFICATION SHEET	EET	February 1997
	P-1 ITEM NOMENCLATURE	
PROCUREMENT OF WPNS & TRKD CMBT VEHS / Weapons and Other Combat Vehicles		M16 RIFLE MODS (GZ2800)

P	Description							
All PYs	1	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Close Combat Optics M16	U,							
2	2.8	2.0	3.4	2.3	0.0	0.0	0.0	0.0
Modular Weapon System	8							
M16A1 to M1	0.0	W16A1 to M16A2 Conversion	4.2	4.7	0.0	0.0	0.0	0.0
8	35.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E.	38.1	5.5	7.6	7.1	0.0	0.0	0.0	0.0
19 (d)								
						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
						The state of the s	The state of the s	
	l							



				SIALL	MODIFICATION INSTALLATION SUMMARFDate	UMMAR	Date		
			(TOA. Dollars in Millions)	ollars in I	Millions)			February 1997	76
	72								
System/Modification	EY 1996	FY 1997	FY 1998	FY 1999	FY 2000	EY 2001	FY 2002	FY 2003	TOTAL
No P3a Set for modification M16 RIFLE MODS	*								
GZZ800					-				
Close Combat Optics M16	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Modular Weapon System	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M16A1 to M16A2 Conversion	10.0			0.0	0.0	0.0	0.0	0.0	10.0
Totals	10.0	0.0	0.0	0.0	0.0	0:0	0.0	0.0	10.0

	INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	Close Combat Optics M16 TBD1			
MODELS OF SYSTEMS AFFECTED:	M16A2 Rifle, XM68 Sight Reflex, XM196 Sight Mount	Mount		
DESCRIPTION / JUSTIFICATION: The XM68 Sight will be installe	ESCRIPTION / JUSTIFICATION: The XM68 Sight will be installed on the M16A2 Rifle with the XM196 Mount.		-	
The Close Combat Optic allow happening in close proximity to	The Close Combat Optic allows the soldier to fire his weapon with both eyes open allowing greater awareness of events happening in close proximity to the soldier and improves hit probability in daylight, low light level, wet weather and other adverse conditions.	เก allowing greater aware nt, low light level, wet we	ness of events ather and other adverse c	onditions.
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	VELOPMENT MILESTONES:	PLANNED	ACCOMPLISHED	
Development/Operational Test	Test		1/2Q96	
Type Classification			4Q96	
Production Contract Award			4096	
First Production Hardware Delivered	e Delivered		1097	

3097

First Unit Equipped

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					2	MIDON	L MODI	INDIVIDUAL MODIFICATION	Z							Date		February 1997	ry 1997	Γ
MODIFICATION TITLE (Cont):		١٥) esek	Close Combat	ایدا	s M16	Optics M16 TBD1													
FINANCIAL PLAN: (\$ in Millions)	7	Ş	-																	
	and Prior	Prior	Ŧ	FY 1997	FY 1998	866	FY 1999	999	FY 2000	8	FY 2001	0.0	FY 2002	302	FY 2003	03	7		TOTAL	٦
	ģ	&	ð	8	ģ	49	ð	H	ğ	ક	Q.	€9	ğ	69	ð	89	ð	€9	ğ	€
RDT&E		1.469												_						1.469
PROCUREMENT									-											
Quantity	8,964		7,264		11,520		7,705		-										35,453	
Installation Kits													·							
Installation Kits Nonrecurring																				
Equipment		2.241		1.816		3.168		2.119				•								9.344
Equipment Nonrecurring																			-	
Engineering Change Orders																		-		
Engineering Support		0.300		0.140		0.132		0.139					,			-		111		0.711
Testing		0.150		0.050		0.050		0.050						•						0.300
Integrated Logistical Support		0.030		0.020		0.020		0.020												0.090
Fielding		0.030		0.020		0.020		0.020	<u>-</u> .						, =					0.090
Interim Contractor Support																				
					- · - · · · ·												•			
Installation of Hardware																				
FY 1996 & Prior Eqpt Kits			8,964									-,		,					8,964	
FY 1997 Eqpt Kits			7,264		-														7,264	
FY 1998 Eqpt Kits					11,520						-							···· •	11,520	
FY 1999 Eqpt Kits							7,705									_			7,705	
FY 2000 Eqpt kits																				
FY 2001 Eqpt kits														-						
FY 2002 Eqpt kits																				
FY 2003 Eqpt kits								-							_					
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost			16,228		11,520		7,705												35,453	
Total Procurement Cost		2.751		2.046		3.390		2.348	H	H										10.535
achooling A fini I MOITATINEME IGM TO COUTTINE	1. 1 A A B	olt colla	9			CTOAT	A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ADMINISTOATIVE		7	diad	_	10000	CITC	- SALECTED IN CITE OF THE	Ú	2	04		
Contract Dates: Aug-96		FY 1997:	5 i			5	FY 1998:			-	MOIIIS		FY 1999:	<u>.</u>	ב על	į		MOUNTS		
		FY 1997:	. <u>.</u> .			_	FY 1998:						FY 1999:							

Installation Schedule: Close	Close Combat Optics M16 TBD1	S M16	IBD:								ota C		ŭ	Fahrijany 1997	997					
	EV 4007	}		9		í	000,			í			i							
	£ - 1		FY 1998	968		Œ	FY 1999			FY 2000	_		Ŧ	FY 2001						
& Prior 1	ත පෑ	4	αı	ෆ ෘ	4 1	⊘t	က	41	┯	ca ca	ы 4	- 1	01	က	41					Total
Inputs																				
FY 1996 & Prior																				
FY 1997																				
FY 1998																				
FY 1999																				
Outputs																				
FY 1996 & Prior																				
FY 1997																				
FY 1998																				
FY 1999																				
	FY 2000		FY 2001	_		FY 2002	202		Ĺ	FY 2003			FY 2004	4			FY 2005	Ω		
	1 2 3	4	1 2	က	4	-	2 3	4	-	Ø	ဗ	4	1 2	က	4	-	8	က	4	Total
Inputs																				
FY 2000																				
FY 2001																				
FY 2002																				
FY 2003																				
Outputs																				
FY 2000																				
FY 2001																				
FY 2002																				
FY 2003																				
Remarks:																				



	INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	Modular Weapon System TBD2			
MODELS OF SYSTEMS AFFECTED:	Rifle, 5.56mm M16A2			
DESCRIPTION / JUSTIFICATION:				
The modular weapon is a syst and ancillary items such as op the field, without tools.	The modular weapon is a system of mounting rails/methods that allows the custom configuration of M16 Rifles with accessories and ancillary items such as optics, night sights, IR laser pointer, the grenade launcher, back-up sights, etc., based upon mission requirements in the field, without tools.	m configuration of M16 Rifl icher, back-up sights, etc., ¹	es with accessories based upon mission rec	luirements in
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	VELOPMENT MILESTONES:	PLANNED	ACCOMPLISHED	
Devek	Developmental/Operational Tests		3/4Q95	
Milest	Milestone III Production Decision	2097		
Produ	Production Contract Award	3097		
First P	First Production Hardware Delivered	3Q98		
First L	First Unit Equipped	4098		

					S	IVIDUA	INDIVIDUAL MODIFICATION	-ICATIO	z						Date			February 1997	
MODIFICATION TITLE (Cont):		ğ	odular	Modular Weap	on Sy	on System TBD2	TBD2												
FINANCIAL PLAN: (\$ in Millions)	EV 4006	9																	
	and Prior	_ - -	FY 1997	766	FY 1998	966	FY 1999	1 66	FY 2000	8	FY 2001	10	FY 2002	202	FY 2003	-	Ç		TOTAL
	ਣੇ	69	ð	\$	È	s	₹	8	₹	89	₹	\$	O	8	ĕ	Ş S	1	f	\$
RDT&E	├—	1.158							-	\vdash	+	1			-	╁	\vdash	<u> </u>	-
PROCUREMENT															·				
Quantity			6,300		8,113		9,333									6	9,254	33,000	00
Installation Kits											-								
Installation Kits Nonrecurring																	···		
Equipment				2.749		3.673		4.242									4.2	4.200	14.864
Equipment Nonrecurring																			
Engineering Support				0.333		0.210		0.235									0.5	0.250	1.028
Testing				0.130					-	·									0.130
Integrated Logistical Support	-			0.070		0.075		0.075									0.0	0.025	0.245
Fielding				0.198		0.255		0.180									0.1	0.172	0.805
Other																			
Interim Contractor Support							-	-											
																			·- <u></u> -
Installation of Hardware																			
FY 1996 & Prior Eqpt Kits									****										
FY 1997 Eqpt Kits	_				6,300					 -					-			6.300	0
FY 1998 Eqpt Kits							8,113			-								8,113	<u>8</u>
FY 1999 Eqpt Kits									9,333									9,333	<u> </u>
FY 2000 Eqpt kits																			
FY 2001 Eqpt kits										•		-			,				
FY 2002 Eqpt kits		-																	
FY 2003 Eqpt kits																			
(FY(TC) Eqpt (xx kits)																9,254	54	9,254	4
Total Installation Cost		\vdash			6,300		8,113	Ĭ	9,333							9,254	54	33,000	0
Total Procurement Cost	-	\dashv		3.480		4.213		4.732		H	H						4.647	47	17.072
METHOD OF IMPLEMENTATION: Unit Application Contact Dates: FY 1997	: Unit Applic	oplication FV 1997:		AE May-07	DMINE 7	STRATI	ADMINISTRATIVE LEADTIME: 07 EV 1998:)TIME:		Ž 9	Months	<u>a. u</u>	PRODUCEY 1999:	TION	PRODUCTION LEADTIME:	12	Months	su	
Delivery Date:	: ≿	FY 1997:		Apr-98	.	_ 1L	FY 1998:					L IL	FY 1999: FY 1999:						
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					Exhibit F
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EV 2001	} - -	N	FY 2004	N	
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EV 2000	3	M			
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EV 1000	é	C)	FY 2002	α	40. 37 3
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4 Total

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FY 2005 8

FY 2000

FY 2000 FY 2001 FY 2002 FY 2003

Inputs

Remarks:

FY 2003

Outputs FY 2000

FY 2001 FY 2002

FY 1996 & Prior

FY 1997 FY 1998 FY 1999

Outputs

Total

February 1997 FY 2001

Date

Installation Schedule: Modular Weapon System TBD2

FY 1997

& Prior 1 FY 1996

FY 1996 & Prior

Inputs

FY 1999

FY 1998

FY 1997

	MOITACIBION INITION			
MODIFICATION TITLE:	M16A1 to M16A2 Conversion TBD3		Date February 1997	
MODELS OF SYSTEMS AFFECTED:	Rifle 5.56mm M16A1 to M16A's			
DESCRIBITION / HIGHIRIDATION				
This conversion of M16A1 Rifl supplement receipts from new retaining two ammunition type year contracts.	This conversion of M16A1 Rifles to the M16A2 version will: accelerate fielding of the M16A2 Rifle, serve as a second source of M16A2 Rifles to supplement receipts from new rifle contractors, reduce storage costs of M16A1 Rifles displaced by newly fielded M16A2s and reduce the need for retaining two ammunition types in the field for two rifle types. FY95 funds are for installation costs. Modification kits are being delivered from prior year contracts.	f the M16A2 Rifle, serve as Rifles displaced by newly fie r installation costs. Modifica	a second source of M16A2 Rifles slded M16A2s and reduce the need tion kits are being delivered from p	tor rior
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:	VELOPMENT MILESTONES:			
	I	PLANNED	ACCOMPLISHED	
Development/Operational Test	il Test	N/A		
Type Classification		N/A		
First Production Hardware Delivered	e Delivered		2092	
Last Production Hardware Delivered	e Delivered	2097		
-				

					INDI	/IDUAL	INDIVIDUAL MODIFICATION	CATION							O	Date		Februs	February 1997	
MODIFICATION TITLE (Cont):		M	6A1 tc	M16	A2 Co	nversi	M16A1 to M16A2 Conversion TBD3	33												
FINANCIAL PLAN: (\$ in Millions)	000F AL	[[.																		
	and Prior	╌	FY 1997	16	FY 1998	86	FY 1999	66	FY 2000	 - 	FY 2001	=	FY 2002	02	FY 2003	93	TC		TOTAL	AL
	Oly (Н	ð	s	δ	છ	ά	\$	Oţ.	\$	δĘ	es	à	69	ξ	69	ð	8	δţ	₩
RDT&E		\vdash														-				
PROCUREMENT									-											
Kit Quantity	115,300														-				115,300	
Installation Kits																				
Installation Kits Nonrecurring							-								··········					
Equipment	25.	25.329		-			-													25.329
Equipment Nonrecurring						-														
Engineering Change Orders										-										
Data	••																			
Training Equipment						•														
Support Equipment																				
Other				•															-	
Interim Contractor Support	•					•					<u>.</u>									
	-																			
Installation of Hardware			·							-										
EV 1006 & Drior Eant Kits	0	0 087	000													**			115.300	9.987
בייי ביייי ביייי ביייי	008'801		3																200	
FY 1997 Eqpt Kits			-	-															•	
FY 1998 Eqpt Kits														-						
FY 1999 Eqpt Kits														ν,						
FY 2000 Eqpt kits																				
FY 2001 Eqpt kits																 -				
FY 2002 Eqpt kits																				
FY 2003 Eqpt kits																				
(FY(TC) Eqpt (xx kits)										+		1	1							
Total Installation Cost	109,300	9.987	000'9							-		-		7		1			115,300	9.987
Total Procurement Cost	35	35.316	\dashv	\exists				-		\dashv	\dashv	1	\dashv	7		\dashv				35.316
METHOD OF IMPLEMENTATION: Depot Installation Contract Dates:	4: Depot Inst FY	Installation FY 1997:	Ē	•	ADMINIS	STRATI	ADMINISTRATIVE LEADTIME: FY 1998:	OTIME:		Σ	Months	<u> </u>	PRODUC FY 1999:	NOIL	PRODUCTION LEADTIME: FY 1999:	ΨË		Months		
Delivery Date:	F	FY 1997:				_	FY 1998:					Ľ.	FY 1999:							

Installation Schedule:	M16A1 to M16A2 Conversion TBD3	16A2 Conve	ersion	TBD3								Date		F. P.	February 1997					
Ĺ	FY 1996 FY	FY 1997		FY 1998	80		FY 1999	666			FY 2000			FY 2001	, <u>1</u>					
~	& Prior 1 2	(3)	-	C#	(S)		ΟI	ro;	41	~	2	4	-	ζ.	က	4				Total
Inputs												I	I	i	I	i				
FY 1996 & Prior	109300 4000 2000																			115300
FY 1997																				
FY 1998																				
FY 1999																				
Outputs																				
FY 1996 & Prior	109300 4000 2000																			115300
FY 1997																				
FY 1998																				
FY 1999																				
	FY 2000	00	.	FY 2001			FY 2002	ณ		Ā	FY 2003			FY 2004			FY 2005	902		
	1 2	3 4	-	8	ဗ	4	Q	က	4	-	2	3 4	-	Ø	က	4	-	2 3	4	Total
Inputs																				
FY 2000																				
FY 2001																				
FY 2002																				
FY 2003																				
Outputs																				
FY 2000																				
FY 2001																				
FY 2002																				
FY 2003	•																			
Remarks:																				
-																				
																				_



						DATE		
	BUE	BUDGET ITEM JUSTIFICATION SHEET	FIFICATION SH	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	IVITY			P-1 ITEM NOMENCLATURE	w			
PROCUREMENT OF	WPNS & TRKD CMBT VEI	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	mbat Vehicles		OW	MODIFICATIONS LESS THAN \$2.0M (WOCV-WTCV (GC0925)	\$2.0M (WOCV-WTCV (GCOS	925)
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	1.3	1.4	1.4	1.4	1.3	1.3	1.4	1.4

DESCRIPTION: Provides for modification of Weapons and Other Combat Vehicles with a cost less than \$2.0 Million.

JUSTIFICATION: Funds will provide machine gun optic sights for the 5.56mm M249 Light Machine Gun and 7.62mm Medium Machine Guns. The optic sight will allow the soldier to identify and engage targets more effectively than the existing iron sighting system.

DÁTE	BUDGET ITEM JUSTIFICATION SHEET	P-1 ITEM NOMENCLATURE	PROCUREMENT OF WIPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	
		APPROPRIATION / BUDGET ACTIVITY	PROCUREMENT OF WPNS & TRKD C	



			TOTAL		3.0	0.0	3.0	
February 1997			FY 2003		0.0	0:0	0.0	
Date			FY 2002 I		0.0	0.0	0.0	······································
UMMAF			FY 2001		0.0	0.0	0.0	
ATION S	Millions)		EY 2000			0.0	0.0	
MODIFICATION INSTALLATION SUMMAR Date	(TOA, Dollars in Millions)		FY 1999			0.0	0.0	
ATION II	(TOA, D		FY 1998			0.0	0.0	
IODIFIC,			FY 1997			0.0	9.0	
2		ă	FY 1996		2.4	0.0	2.4	
			System/Modification	* Modification ** MODIFICATIONS LESS THAN \$2.0M (WOCV-WTCV) GC0925	M198 Howitzer System Improvement	Machine Gun Optics	Totals	

	INDIVIDUAL MODIFICATION	Fohrugar 1007
MODIFICATION TITLE:		1997
MODELS OF SYSTEMS AFFECTED:	M198 Howitzer, Medium Towed	
DESCRIPTION / JUSTIFICATION:		
Ē		

improve the retention of hardware and improve equilibrator adjustment. The areas of improvement were a result of M198 fielded system review. Improvements in ram, handling maneuverability, durability of parts, a reduction in operator fatigue and increased users satisfaction is expected. The purpose of the Materiel Change (MC) is to improve the reliability of the M198 System, improve the brake system, reduce operator fatigue,

PLANNED ACCOMPLISHED	9000	1088		000			1000	1906		4098
	MC Project Initiated	Test Initiated	Independent Evaluation Completed	IPR/Production Decision	Production Contract Awarded	First Production Hardware Delivered	MFA/MWOFP Negotiated	First Kit Applied	Last Kit Applied	Collective Evaluation Completed

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

					Z	DIVIDU	AL MOE	INDIVIDUAL MODIFICATION	NO							Date		Febru	February 1997	
MODIFICATION TITLE (Cont):		Σ	198 F	lowitz	er Sys	stem I	mprov	M198 Howitzer System Improvement TBD1	TBD1											
FINANCIAL PLAN: (\$ in Millions)	FY 1996	99																		
	and Prior	ية و	7	FY 1997		FY 1998		FY 1999	FY	FY 2000	FY 2001	2001	FY 2002	\$005	FY 2003	6003	10	υ ψ	TOTAL	AL.
ш *	3	•	3	9	3	•	3	•	3	,	3	•	3	•	3	1		•	(1)	,
PROCUREMENT	730																		739	
Installation Kits	3				·														3	
Installation Kits Nonrecurring														-						
Equipment		-																		
Equipment Nonrecurring	<u> · </u>	9.755																		9.755
Data																				
Training Equipment																				
Support Equipment																				
Fielding		0.071		_																0.071
Interim Contractor Support															_					
Installation of Hardware																				•
FY 1996 & Prior Eqpt Kits	673	2.388	99	0.627	_													-	739	3.015
FY 1997 Eqpt Kits																				
FY 1998 Eqpt Kits																				
FY 1999 Eqpt Kits																				
FY 2000 Eqpt kits																				
FY 2001 Eqpt Rits																				
FY ZOUZ Eqpi Kils																				
FY 2003 Eqpt kits					*****															
(FY(1C) Eqpt (XX Kits)	6.20	0000	99	0.627															730	3.015
Total Installation Cost		2000	3	0.057										Ī					3	14 457
lotal Procurement Cost		3.830		0.02																707.41
METHOD OF IMPLEMENTATION: Depot					ADMII	NISTRA	TIVELE	ADMINISTRATIVE LEADTIME:	ш̈		Months		PRODL	JCTION	PRODUCTION LEADTIME:	IME:	_	Months		
Contract Dates:	u. ii.	FY 1997: FY 1997:	K K				FY 1998: FY 1998:	38: 38:					FY 1999: FY 1999:	9. F.						
cancel care:																				

R Prior 673 17 17 18 14 2 3 4 1 3 4 1 3 3 4 1	#Prior 673 4 1 2 3 4 1 3 3 4 1 3 3 4 1 3 3 4 1 3 3 4 1 3 3 4 1 3 3 4 1 3 3 4 1 3 3 4 3 3 4 3 3 4 3 3 3 4 3 3 3 3	FY 1966	Installation Schedule:		98 Hc	witze	r Sys	tem Ir	mpro/	/emei	nt TBC	Ē							Date	2		Februs	February 1997					
8 Prior 673 17 17 18 14 2 3 4 1 <	8 Prior 673 17 19 14 2 3 4 1 2 3	R Prior 673 17 18 14 1 2 3 4 1 <t< th=""><th></th><th>FY 1996</th><th></th><th>FY 19</th><th>261</th><th></th><th></th><th>FY 1</th><th>968</th><th></th><th></th><th>FY 19</th><th>66</th><th></th><th></th><th>FY 200</th><th></th><th></th><th></th><th>FY 200</th><th>· -</th><th></th><th></th><th></th><th></th><th></th></t<>		FY 1996		FY 19	261			FY 1	968			FY 19	66			FY 200				FY 200	· -					
8 Prior 673 17 17 18 14 8 Prior 673 4 10 17 18 17 1 2 3 4 1 2	& Prior 673 17 17 18 17 & Prior 673 4 10 17 18 17 FY 2000 FY 2001 FY 2002 FY 2003 FY 2005 1 2 3 4 1	8 Prior 673 17 17 18 14 8 Prior 673 4 10 17 18 17 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 1 2 3 4 1 1 2 3 4 1 1 2 3 4 1 1 2 3 4 1 1 2 3 4 1 1 2 3 1 4 1 1 2 3		& Prior	-	αı	ю	41	H	QI	က	41	-	OI.	rol			Q		4	•			-+				Ē
8 Prior 673 17 17 18 14 8 Prior 673 4 10 17 18 17 FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1	& Prior 673 4 10 17 18 17 & Prior 673 4 10 17 18 17 FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1	8 Prior 673 17 17 18 14 8 Prior 673 4 10 17 18 17 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1	Inputs																	i	i			ı				¥
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# Prior 673 4 10 17 18 17 FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1	8 Prior 673 4 10 17 18 17 FY 2000 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1	8 Prior 673 4 10 17 18 17 FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 1 2 3 4 1 1 2 3 4 1 1 2 3 4 1 1 1 2 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1																										
8 Prior 673 4 10 17 18 17 FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1	8 Prior 673 4 10 17 18 17 FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 1 2 3 4 1 1 1 2 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8 Prior 673 4 10 17 18 17 FY 2005 FY	Outputs																									
FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 1 2 3 4 11 2	FY2000 FY2001 FY2002 FY2003 FY2004 FY2005 1 Z 3 4 1 Z 3 4 1 Z 3 4 1 Z 3 4 Z 3	FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 Z 3 4 1 Z 3 4 1 Z 3 4 1 Z 3 4 Z 3	FY 1996 & Prior	673	4	우	17	8	1																			7
FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 1 2 3 4	FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3	FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 1 2 3 4	FY 1997																									•
FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3	FY2000 FY2001 FY2002 FY2003 FY2004 FY2005 1 2 3 4 1 2	FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 <td>FY 1998</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	FY 1998																									
FY2000 FY2001 FY2002 FY2003 FY2004 FY2005 1 2 3 4 1 2	FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3	FY 2000 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 In schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Amiston Army Depot (ANAD) and resultant learning curve.	FY 1999																									
1 2 3 4 1 3 4 1	1 2 3 4 1 2 3 4	1 2 3 4 1 2 3			iL.	Y 2000			L.	:Y 2001			Œ	1 2002			Ę	, 2003			Ŧ	2004			Ą	2005		
		: n schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.			-	8	က	4	-	8	က	4	-	8	က	4	-	7	က	4		N	က	4		8	m	4 Tot
	FY 2000 FY 2001 FY 2002 FY 2003 FY 2000 FY 2000 FY 2000 FY 2000 FY 2000 FY 2000 FY 2003	FY 2000 FY 2002 FY 2002 FY 2003 Outputs FY 2000 FY 2000 FY 2000 FY 2000 FY 2000 FY 2000 FY 2000 FY 2003 FY 2003 FY 2003 Remarks: Application schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.	Inputs)	
	FY 2002 FY 2002 FY 2003 Outputs FY 2000 FY 2000 FY 2001 FY 2001 FY 2001 FY 2001 FY 2002 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003	FY 2002 FY 2002 FY 2003 Outputs FY 2000 FY 2000 FY 2000 FY 2001 FY 2002 FY 2002 FY 2003 Remarks: Application schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.	FY 2000																									
	FY 2002 FY 2003 FY 2000 FY 2000 FY 2001 FY 2002 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003	FY 2002 FY 2003 Outputs FY 2000 FY 2000 FY 2000 FY 2002 FY 2002 FY 2003 Remarks: Application schedule adjustment is a result of transfer of function from Letterkenry Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.	FY 2001																									
	FY 2003 Cutputs FY 2000 FY 2001 FY 2002 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003 FY 2003	6 by 2003 Outputs FY 2000 FY 2001 FY 2002 FY 2003 FY 2003 Remarks: Application schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.	FY 2002																									
	Outputs FY 2000 FY 2001 FY 2002 FY 2003 FY 2003 FRemarks:	PY 2000 FY 2001 FY 2002 FY 2003 Remarks: Application schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.	FY 2003																									
	Outputs FY 2000 FY 2001 FY 2002 FY 2003 FY 2003 FRemarks:	Outputs FY 2000 FY 2001 FY 2002 FY 2003 FY 2003 Remarks: Application schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.																			٠,							
	FY 2000 FY 2001 FY 2002 FY 2003 FY 2003 FY 2003	FY 2000 FY 2001 FY 2002 FY 2002 FY 2003 Remarks: Application schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.	Outputs																									
FY 2001 FY 2002 FY 2003 FY 2003 Remarks:	FY 2001 FY 2002 FY 2003 Remarks:	FY 2001 FY 2002 FY 2003 Remarks: Application schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.	FY 2000																									
FY 2002 FY 2003 Remarks:	FY 2002 FY 2003 Remarks:	FY 2002 FY 2003 Remarks: Application schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.	FY 2001																									
FY 2003 Remarks:	FY 2003 Remarks:	FY 2003 Remarks: Application schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.	FY 2002																									
Remarks:	Remarks:	Remarks: Application schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.	FY 2003		•																							
		Application schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.	Remarks:																									

	INDIVIDUAL MODIFICATION		Date	February 1997
MODIFICATION TITLE:	Machine Gun Optics TBD2			
MODELS OF SYSTEMS AFFECTED:	M249 Squad Automatic Weapon; M60 Machine Guns	guns		
DESCRIPTION / JUSTIFICATION:				
The Machine Gun Optic Progr Guns. The optic sight will allov	The Machine Gun Optic Program provides an optic (telescopic) sight for the 5.56mm M249 Light Machine Gun and 7.62mm Medium Machine Guns. The optic sight will allow the soldier to identify and engage targets more effectively than the existing iron sighting system.	mm M249 Light Machine C fectively than the existing i	มน and 7.62mm Mediu ron sighting system.	m Machine
DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTON	VELOPMENT MILESTONES:	PLANNED	ACCOMPLISHED	
Develc	Development/Operational Tests	2097		
Туре (Type Classification	4Q97		
Produc	Production Contract Award	4Q97		
First P	First Production Hardware Delivered	1098		
First U	First Unit Equipped	2098		

					<u>8</u>	IVIDUA	L MODI	INDIVIDUAL MODIFICATION	×						مّا	Date		February 1997	v 1997	
MODIFICATION TITLE (Cont):		Σ	Machine Gun O	3 Gun	Optics	ptics TBD2	2													
FINANCIAL PLAN: (\$ in Millions)	EV 1006	9																		
	and Prior	j. S	FY 1997	766	FY 1998	866	FY 1999	666	FY 2000	000	FY 2001	10	FY 2002	720	FY 2003	53	Ţ	\mid	TOTAL	14
	Qţy	s	Q	\$	ð	69	ð	\$	₽		₽	65	ĕ	es S	ĕ	+	2 2 0	65	ē de	Ę (#:
RDT&E	7	2.758									-				_	╁		+		2.758
PROCUREMENT			·-·		•••															
Quantity			876		1807		1790		1579		1563						3385		11000	
Installation Kits					-															
Installation Kits Nonrecurring														-						
Equipment				0.577		1.173		1.163	•	1.027		1.017				<u>-</u>	- '	2.75B	-	7715
Equipment Nonrecurring							•								-			0.250		0.250
Engineering Support				0.114		0.143		0.143	_	0.143		0.144						0.050		0.230
Testing				0.075		0.050		0.050	_	0.050	_	0.050						0.020		0.295
Integrated Logistical Support				0.017		0.020		0.019		0.020		0.020						0000		0.116
Fielding				0.017		0.020		0.020		0.020		0.020			-			20.0		0.007
Other) 								60.0
Interim Contractor Support	- 44										-						-		-	
																				
Installation of Hardware																				
FY 1996 & Prior Eqpt Kits						-							**							
FY 1997 Eqpt Kits			876							=								-	876	
FY 1998 Eqpt Kits					1807														1807	
FY 1999 Eqpt Kits	-		-				1790												1790	
FY 2000 Eqpt kits			7/844						1579										1579	
FY 2001 Eqpt kits	•										1563				-				1563	
FY 2002 Eqpt kits																			2	
FY 2003 Eqpt kits							***********													
(FY(TC) Eqpt (xx kits)												-				(7)	3385		3385	
Total Installation Cost			928		1807		1790		1579		1563				-	"	3385		11000	
Total Procurement Cost	-	\exists		0.800		1.406		1.395		1.260		1.251				-	ı	3.098		9.210
TO CONTRACT TO CONTRACT						į	i !	!												
Contract Dates:	II ABBII	DDIICATION EV 1097:		Sen.07	ADMINION'	HAII	MINISTRATIVE LEADTIME:	DTIME:		ĕ -	Months	ā í	PRODUCTION LEADTIME:	TION	EADTIM		4 Mo	Months		
Delivery Date:	: ≿	FY 1997:		Dec-97		L LL	FY 1998:					Lίι	FY 1999: FY 1999:							
			l									-	.000							



Installation Schedule:	le: Machine Gun Optics TBD2	ne Gun	Optic	S TBL	2									ءُ ا	Date		February 1997	v 1997					
	FY 1996	FY 1997	997		ļ	FY 1998	8 6		Ţ	FY 1999			FY 2000		!	_	FY 2001						
	& Prior 1	0 1	m	41	+1	01	(C)	4	CAT	ପ	41		CNI	(C)	41	- -1	21	41					Total
Inputs																							
FY 1996 & Prior																							
FY 1997																							
FY 1998																							
FY 1999																							
ı																							
Outputs																							
FY 1996 & Prior																							
FY 1997																							
FY 1998																							
FY 1999																							
		FY 2000	ō		ш	FY 2001			FY 2002	202			FY 2003			Ŧ	FY 2004			FY 2005	05		
	*	2	က	4	-	Ø	က	4	-	2 3	4	-	8	ဗ	4	-	8	က	4	21	e 6	4	Total
Inputs																							
FY 2000																							
FY 2001																							
FY 2002																							
FY 2003																							
Outputs																							
FY 2000																							
FY 2001																							
FY 2002																			•				
FY 2003																							
Remarks:	An installation schedule is not required for this modification.	n schedu	ile is not	require	d for th	is modif	cation.																

						DATE		
	BUC	BUDGET ITEM JUST	TIFICATION SHEET	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY	IVITY			P-1 ITEM NOMENCLATURE	3			
PROCUREMENT OF	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	HS /Weapons and Other Co	mbat Vehicles	,		ITEMS LESS THAN \$2.0M	ITEMS LESS THAN \$2.0M (WOCV-WTCV) (GL3200)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0		0	0	0	0
COST (in millions)	1.1	1.8	1.2	1.2	1.3	1.3	1.4	1.4

maintenance personnel to maintain weapons and combat vehicles, and by Active Army, National Guard, Reserve and ROTC units to perform combat and training missions. The tool/shop equipment has multi-applications and is essential to all levels of weapon and combat vehicle DESCRIPTION: Provides for procurement and assembly of tool/shop sets, small arms, and gun mounts. The items are needed by maintenance. JUSTIFICATION: Required to achieve and sustain required levels of readiness to units providing maintenance support to all small arms (M16,9mm Pistol, 7.62 Machine Gun, etc.), artillery (M102,M119,M198 Howitzers, etc.), air defense (Vulcan, PIVAD, etc.) special weapons, and fire control (Tanks, etc.) organizations. Small Arms Weapons and mounts are required to support AAO shortages, field replacements and training requirements. ibit P-40 h Sheet

Budget Item Just

MICHAEL MICH			A. APPN / BUDGE	T ACTIVITY	TITLE/NO		B. WEAPON	z		Г	C. MANUFACTURER NAME		D. DATE	
Colored Colo	Cost		PROCUREME	ENT OF WE	NS & TRKD C	MBT VEHS / 2 /	ITEMS	LESS THAN \$2 (GL32	2.0M (WOCV-W	JCV)	Vari	sno	Febr	lary 1997
Control Cont	WTCV	Ω		FY 96			FY 97			FY 98			FY 99	
G422 A 120 S25 S90 S90 420 S90 410 S90 400 410 S90 410	Cost Elements	8	TotalCost	δ	UnitCost	TotalCost	Oty Oty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Oty	UnitCost
G422 A 120 525 99 420 99 9 40 10 99 410 100 4 10 100 10 10 10 10 10 10 10 10 10 10 10		H	000\$	Each	\$000	000\$	Each	\$000	\$000	Each	\$000	\$000	Each	\$000
G124 A 120 SSS		∢							45	വ	6	40	4	10
G419 A	Shot Gun, 12 Gage	∢	120	525		66	420		66	410		100	400	
G348 A 107 4 27 404 111 37 444 12 37 446		Ψ.							92	4	23	72	က	24
G371 A 73 5 15 70 5 14 135 10 14 143 G385 A 145 2 73 111 2 56 224 4 56 228 F072 A 6 688 G723 A 6 688 1113 A 688 1115 A 688		∢	107	4	27	404	=	37	444	5	37	456	12	38
G385 A 145 2 73 111 2 56 224 4 56 228		∢				76	S	15	76	r.	15	80	Ŋ	16
G385 A 145 2 73 111 2 56 224 4 56 228 F072 A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		4	73		15	70	ĸ	4	135	10	14	143	10	14
F072 A A 1007 22 46 13 6 13 70 1007		∢	145		73	Ŧ	N.	56	224	4	56	228	4	57
Maint F073 A		∢							12	ю	4	8	N	4
and Alone) PEND A 668 1007 22 46 13 70 1007 1113 1202		∢							10	9	-	S	S.	-
and Alone) PEND A 668 46 1007 22 46 1113 1767 1207 120 46 1007 1007 1007 1007 1007 1007 1007 100		∢							78	9	13	70	သ	14
A 668 1113 1767		4				1007	22	46						
1113 1767 1215	12. XM144 Telescope	⋖	899											
	TOTAL		1113			1767			1215			1202		

						DATE		
	BUDG	BUDGET ITEM JUSTII	FICATION SHEET	ET		February 1997		
APPROPRIATION / BUDGET ACTIVITY	TIVITY			P-1 ITEM NOMENCLATURE	ш			
PROCUREMENT OF	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	1S /Weapons and Other Co	mbat Vehicles		u.	PRODUCTION BASE SUPPORT (WOCV-WTCV) (GC0050)	AT (WOCV-WTCV) (GC008	20)
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	5.9	4.3	6.2	6.5	6.4	6.3	6.8	6.9

Description: This program provides for Provision of Industrial Facilities (PIF). Funds are used to establish modernize, expand and replace facilities equipment used in production, production testing of Weapons and Tracked Combat Vehicles. Also provides funding for the Layaway of Industrial owned by the Army and provide Production Support and Equipment Replacement (PSR) and Modernization (MOD) to Government owned Facilities (LIF) for preservation of equipment and portions of plants which are no longer required for active production.

Justification: The FY98 and FY99 request includes essential funding for replacement of equipment & instrumentation in production test facilities at Aberdeen, Yuma Proving Grounds, and White Sands Missile Range (WSMR). Funding also supports layaway of industrial equipment which is excess to production requirements at Rock Island and Watervliet Arsenals.

FY 1999	3.594 2.946	6.540
FY 1998	3.473 2.722	6.195
FY 1997	1.478 2.833	4.311
FY 1996	3.215 2.640	5.855
	PIF LIF	TOTALS

	Produc	Production Support and Facilities Projects		DATE	February 1997	
APPROPRIATION / BUDGET ACTIVITY	ET ACTIVITY	d	P-1 ITEM NOMENCLATURE			
PROCUREMENT	OF WPNS & TRKD CMB	PROCUREMENT OF WPNS & TRKD CMBT VEHS Meapons and Other Combat Vehicles	PRODUCTION	PRODUCTION BASE SUPPORT (WOCV-WTCV) (GC0050)	V-WTCV) (GC0050)	
PROJECT NO.	IYPE	NAME/LOCATION	FY 1996	FY 1997	EY 1998	FY 1999
09X5263	МОР	Combat Systems Testing Activity (CSTA) Aberdeen Proving Ground	1.360	0.600	1.470	1.613
Provides funds to replinstrumentation used	lace, modemize and In production testing	Provides funds to replace, modernize and upgrade equipment and instrumentation used in production testing of WTCV, such as the M981				
Fire Support Vehicle,	M1 Tank, M2/M3 B	Fire Support Vehicle, M1 Tank, M2/M3 Bradley Fightling Vehicle, 105MM				
and 120MM cannons. Upgrading will be performed on	. Upgrading will be j	performed on automotive				
performance Test Equ	uipment, vehicle dyr	performance Test Equipment, vehicle dynamics, high speed Imaging, interior				
exterior ballistics supp	oort instrumentation _.	exterior ballistics support instrumentation, and toxic fumes instrumentation.				
09X5268	МОД	Yuma Proving Grounds	1.214	0.600	1.464	1.450
Provides funds to replace, modernize and upgrade equ	ace, modemize and	fupgrade equipment and				
instrumentation used in production testing of WTCV.	in production testing	g of WTCV. The funding will				
also provide telemetry	r data collection inte	also provide telemetry data collection interfaces, Weapons firing				
instrumentation, and video instrumentation enhancements.	/ideo instrumentatio	n enhancements.				,
09X5269	PSR	White Sands Missile Range	0.641	0.278	0.539	0.531
Provides funds to repla	ace, modernize and	Provides funds to replace, modernize and upgrade the test and evaluation		ν,		
mission for production	n testing at WSMR.	mission for production testing at WSMR. The equipment/instrumentation includes:				
the Linear Accelerator	r (LINAC) which sim	the Linear Accelerator (LINAC) which simulates high-intensity gamma spikes		=		
of a nuclear weapon d	letonation, equipme	of a nuclear weapon detonation, equipment used to support electromagnetic				
radiation effects testing, and equipment to monitor the	g, and equipment to	o monitor the air activity at facilities				
where materiel is against a radiation source.	inst a radiation sourc	99.				

Production Support and Facilities Projects	/G	DATE F	February 1997	
APPROPRIATION / BUDGET ACTIVITY P-1 ITEM	P-1 ITEM NOMENCLATURE			
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	PRODUCTION	PRODUCTION BASE SUPPORT (WOCV-WTCV) (GC0050)	WTCV) (GC0050)	
PROJECT NO. TYPE NAME / LOCATION	EY 1996	EY 1997	FY 1998	FY 1999
69X7667 LIF-Omnibus Layaway and Redistribution of Government-Owned Equipment, Rock Island & Watervilet Arsenals	2.640	2.833	2.722	2.946
Provides funds for preservation of equipment and portions of plants which are no longer required for active production, but must be retained for				
future use. Also provides for plant clearance and preparation of				
equipment to be excessed.				

						DATE		
	BUDG	BUDGET ITEM JUSTII	IFICATION SHEET	T:		February 1997		
APPROPRIATION / BUDGET ACTIVITY	YTIVI			P-1 ITEM NOMENCLATURE				
PROCUREMENT OF	PROCUREMENT OF WPNS & TRKD CMBT VEHS Meapons and Other Combat Vehicles	4S /Weapons and Other Co	mbat Vehicles			INDUSTRIAL PREPA	INDUSTRIAL PREPAREDNESS (GC0075)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	5.3	5.1	5.8	5.7	6.2	6.1	6.6	6.6

grounds, utilities, fire and guard protection. Also includes funding for condition assessments of laidaway facilities and costs to rehabilitate equipment to useable condition. DESCRIPTION: This program provides funding to retain, protect, and maintain laidaway reserve industrial plants and equipment. Costs include

JUSTIFICATION: The FY98 and FY99 request supports equipment and facilities at Rock Island & Watervliet Arsenals. Funds also support some of the retention, maintenance and the cost for guard protection at the M-1 facilities which are not being utilized at the Detroit Arsenal Tank Plant.

A summary listing of projects is attached.

Production Support and Facilities Projects	DATE		February 1997	
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles		INDUSTRIAL PREPAREDNESS (GC0075)	GC0075)	
PROJECT NO. TYPE NAME/LOCATION	FY 1996	FY 1997	EY 1998	FY 1999
G9X2100 Plant Equipment Storage, Seneca Army Depot Provides for storage and maintenance of equipment which is being retained at Seneca to meet future production requirements. It also provides for depot personnel who perform condition assessment reviews of equipment stored at Seneca and other	1.049	0.115		
Government and contractor storage sites. 49X4290 Retention & Maintenance - Facilities TACOM, Rock Island & Watervilet Arsenals. Provides for storage of equipment for future production. Also provides funding to maintain grounds, buildings and provide	2.182	2.200	2.879	2.856
fire/guard protection for inactive portions of tracked vehicle production facilities. 69X7670 Retention & Maintenance Plants and Equipment Watervilet & Rock Island Arsenals. Provides for overhead costs attributed to laidaway portions of the arsenals. Also funds storage and maintenance costs of equipment which has been laidaway for future production.	2.052	2.771	2.879	2.857

					DATE		
	ET ITEM JUST	BUDGET ITEM JUSTIFICATION SHEET	EET			February 1997	
APPROPRIATION / BUDGET ACTIVITY			P-1 ITEM NOMENCLATURE	ш			
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	Veapons and Other Con	nbat Vehicles			SMALL ARMS (SOLDIER ENH PROG) (GC0076)	8 ENH PROG) (GC0076)	
FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY 0	0	0	0	0	0	0	0
COST (in millions) 2.4	5.8	4.2	5.6	6.5	6.9	2.5	2.0

M60 Machine Gun from the M998 HMMWV and a mount for firing the M249 from the M1025/1026 HMMWV. The Dual Mount can be used in both the Thermal Systems. The HMMWV Mount provides the soldier with a pedestal and a mount for firing the M249 Squad Automatic Weapon (SAW) and vehicular (M1025/1026 HMMWV) and ground mount application for the MK19 Grenade Machine Gun (GMG) and M2 Heavy Barrel Machine Gun. The Boresight Aiming & Thermal System provides the soldier with a small arms muzzle boresight with capabilities to boresight visible day, night DESCRIPTION: This program provides small arms equipment for the soldier, a HMMWV Mount, Dual Mount and a Boresight for Aiming and mage intensifiers and forward looking infrared fire control sighting systems and infrared laser aiming devices.

platoons enabling them to install or switch weapons quickly in the event one vehicle goes down. Additionally the system corrects the shortcomings of Machine Gun and capability for range card preparation. The U.S. Army will now have the capability to boresight forward looking infrared and image The field has devised several non-standard and possibly unsafe methods of mounting weapons on the M998. This program will provide a standard, JUSTIFICATION: Certain applications of the M998 HMMWV require that weapons be displayed and be available quickly for enemy confrontation. the current MK64 system allowing for bold and accurate traverse and elevation, further range (elevation) for the MK19, recoil attention of the M2 supportable weapon mount. Military Police and certain infantry units currently mount the M60 Machine Gun on the M1025/1026. As the M60 is replaced by the M249 Machine Gun the need to mount the M249 on the M1025/1026 HMMWV arises. The Dual Mount will be fielded to scout intensifier laser aiming devices.

D. DATE	February 1997	FY 99	┢	Each			20 1320 0.545	000 3000 1.000	02.0	090		00	8	
C. MANUFACTURER NAME			TotalCost	\$000		е	3 0.720	3.000	0.250	0.350	0.100 0.366 0.075	0.100	5.598	
_			UnitCost	ક		2.063	0.543							
) (GC0076)	FY 98	ਰੇ	Each		9 660	1320							
	R ENH PROG		TotalCost	000\$		1.362	0.717		0.450	0.550	0.189	0.230	4.178	
NO	SMALL ARMS (SOLDIER ENH PROG) (GC0076)		UnitCost	8	1.848	1.900	0.500							
B. WEAPON	SMALL /	FY 97	Qfy	Each	998	099	1320							
	PHOCUHEMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles		TotalCost	\$000	1.600	1.254	0.660		0.275 0.398	0.450	0.050 0.153 0.794	0.075 0.130	5.839	-
Y TITLE/NO	HEMEN I OF WPNS & TRKD CMBT VI Weapons and Other Combat Vehicles		UnitCost	s	2.062	1.642	0.445							
ET ACTIVIT	DONS and C	FY 96	ĝ	Each	9//	120	80							
A. APPN / BUDGET ACTIVITY TITLE/NO	PHOCUMEM Wea		TotalCost	\$000	1.600	0.197	0.036		0.225	0.050	0.025 0.047 0.053		2.350	
Ì	1	Ω	8	1										
WITH THE MALE	- 1	WTCV	Cost Elements	. Hardware	MK93 MOD 1 DUAL MOUNT	HMMWV M249 Mount M998 (Quantity)	M1025/1026 (Quantity)	Boresight for Aiming & Thermal Sights	2. ESIP Dual Mount HMMWV M249 Mount Boresight for Aiming & Thermal Sights	 Testing Dual Mount HMMWV M249 Mount Boresight for Aiming & Thermal Sights 	 Integrated Logistics Support Dual Mount HMMWV M249 Mount Materiel Release/Engineering Studies Boresight for Aiming & Thermal Sights 	5. Fielding Dual Mount HMMWV M249 Mount Boresight for Aiming & Thermal Sights	TOTAL	



	BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	PLANNII	NG EXHIBIT (P-5A)					DATE Fe	February 1997	197
B. APPROPRIATION / BUDGET ACTIVITY					C. P-1 ITEM N	C. P-1 ITEM NOMENCLATURE	Ш			
PROCUREMENT OF WPNS & TF	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles	r Combat Vef	hicles			SMALL ARMS	SMALL ARMS (SOLDIER ENH PROG) (GC0076)	POG) (GC	(9200	
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT	CONTRACTED BY	AWARD DATE	DATE OF FIRST	αIV	UNIT COST			F YES W/A
DUAL MOUNT/FY96	Fraser Maunfacturing Corp	C/FFP	ACALA	May-96	May-97	776	2827	Yes	Yes	Aug-95
DUAL MOUNT/FY97	Fraser Maunfacturing Corp	С/ЕГР	ACALA	Apr-97	Jan-98	998	2827	·····		-
HMMWV M249 MOUNT/FY96 M6 Pedestal	Ramo Manufacture Inc. Nashville, Tn	C/FFP	ARDEC	96-Inc	Apr-97	120	1200	Yes	§	
M197 Mount	Nautic-All	C/FFP	ARDEC	Aug-96 Mar-97	Mar-97	200	445			
HMMWV M249 MOUNT/FY97 M6 Pedestal	Ramo Manufacture Inc. Nashville, Tn	С/FFР	ARDEC	May-97 Nov-97	Nov-97	099	1400			***************************************
M197 Mount	Nautic-All	C/FFP	ARDEC	May-97 Nov-97	Nov-97	1980	200			
HMMWV M249 MOUNT/FY98 M6 Pedestal	Ramo Manufacture Inc. Nashville, Tn	С/FFP	ARDEC	Jan-98	Jul-98	098	2063			
M197 Mount	Nautic-All	C/FFP	ARDEC	Jan-98	36-Jnc	1980	543			
HMMWV M249 MOUNT/FY99 M6 Pedestal	Ramo Manufacture Inc. Nashville, Tn	C/FFP	ARDEC	Jan-99	96-Inc	0				
M197 Mount	Nautic-All	C/FFP	ARDEC	Jan-99	66-Inc	1320	545			
M998 HMMWV requires 1 M6 Pedestal and 1 M197 Mount M1025/1026 HMMWV requires 1 M197 Mount	jut ———									
REMARKS:										

BUDGET PRO	BUDGET PROCUREMENT HISTORY AND	PLANNIN	RY AND PLANNING EXHIBIT (P-5A)					DATE	February 1997	
B. APPROPRIATION / BUDGET ACTIVITY					C, P-1 ITEM N	C, P-1 ITEM NOMENCLATURE	ļ,			
PROCUREMENT OF WPNS & TR	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles	r Combat Vehic	cles			SMALL ARMS	SMALL ARMS (SOLDIER ENH PROG) (GC0076)	POG) (GC)	(920	
LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Fach	UNIT COST	SPECS AVAIL NOW	SPEC IF REV	IF YES W/A
S (BATS)/FY99	TBS		TBS	Aug-99		3000	1000		9 2	
REMARKS:										



						DATE	•	
	BUDG	ET ITEM JUSTI	BUDGET ITEM JUSTIFICATION SHEET	ET		February 1997		
APPROPRIATION / BUDGET ACTIVITY	IVITY			P-1 ITEM NOMENCLATURE				
PROCUREME	PROCUREMENT OF WPNS & TRKD CMBT VEHS /Spares and R	3T VEHS /Spares and Repa	Repair Parts			SPARES AND REPAIR P	SPARES AND REPAIR PARTS (WTCV) (GE0150)	
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	25.3	20.3	20.6	14.4	14.8	15.2	28.7	29.6

Description: Provides for procurement of spares to support initial fielding of new or modified end items.

Justification: The funds in this account procure depot level reparable (DLRs) secondary items from the Supply Management, Army (SMA) revolving fund (formally Army Stock Fund). To provide initial support, funds are normally required in the same year that end items are fielded. Initial spares breakout:

System	FY 1996	FY 1997	FY 1998	FY 1999
GE0161 M1A2	16.0	9.3	13.9	10.1
GE0163 BFVS	5.2	9.3	ω	1.5
GE0167 M109	2.4	4.1	3.7	
GE0171 IRV	1.6	ú.	ω.	
GEO173 C2V			o.	6.
GEO177 HAB			o;	တ
Total Initial Issue	25.3	20.3	20.6	14.4
Total Replenishment and War Reserve				
·				
Totals	25.3	20.3	20.6	14.4

PROCUREMENT OF WEAPONS AND TRACKED COMBAT VEHICLES, ARMY

APPROPRIATION LANGUAGE

spare parts, and accessories therefore; specialized equipment and training devices; expansion of public and private plants, and the land poses; \$1,065,707 lin fiscal year 1998 to remain available for obligation until September 30, 2000 and \$1,475,106 in fiscal year 1999 to plants; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing pur-For construction, procurement, production, and modification of weapons and tracked combat vehicles, equipment; including ordnance, necessary therefore, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private remain available for obligation until September 30, 2001. COMPARISON OF FY 1997 PROGRAM REQUIREMENTS
AS REFLECTED IN THE FY 1997 BUDGET
WITH THE FY1997 PROGRAM REQUIREMENTS AS
SHOWN IN THE FY 1998/1999 BUDGET
SUMMARY OF REQUIREMENTS (In MIIIIONS of Dollars)

Appropriation Procurement of Weapons and Tracked, Combat Vehicles, Army	FY 1997 Requirements Per FY1997 Budget	FY 1997 Requirements Per FY1998/1999 Budget	Increase or (Decrease)
Activity 1 - Tracked Combat Vehicles	1,028	1,344	316
Activity 2 - Weapons & Other Combat Vehicles	54	104	90
Activity 3 - Spares and Repair Parts	20	20	0
Reimbursable Program	179	479	OI
	1,281	1,647	366

EXPLANATION BY ACTIVITY

Activity 1 - Tracked Combat Vehicles. The increase resulted from Congressional adjustments to Bradley Base Sustainment (+\$100.6), Recovery Vehicle (+\$27.1), M1 Abrams Mods (+13.0), and Armored Earthmover (+\$51.0) as well as adjustments for Sections 8037 and FAASV (+\$29.8), Carrier Mods (+\$20), Bradley Mods (+\$35.5), Howitzer 155mm (+\$31.2), FAASV Pip to Fleet (+\$9.1), Improved 8138 of the FY1997 Appropriations Act (-\$1.7).

(+\$1.0), MK19-3 Grenade Launcher (+\$28.0), Med Machine Gun (+\$20.0), M16 Rifle (+\$1.0), and Carbine M4 (+\$1.0) as well as pro rata Activity 2 - Weapons and Other Combat Vehicles. The increase resulted from Congressional adjustments to Machine Gun, 556mm adjustments for Section 8138 of the FY 1997 Appropriations Act (-0.0)

Activity 3 - Spares and Repair Parts. Not applicable.

Reimbursable Program. Not applicable.

COMPARISON OF FY 1997 PROGRAM REQUIREMENTS AS REFLECTED IN THE FY 1998/1999 BUDGET WITH THE FY1998 PROGRAM REQUIREMENTS AS SHOWN IN THE FY 1998/1999 BUDGET SUMMARY OF REQUIREMENTS (In Millions of Dollars)

Appropriation Procurement of Weapons and Tracked Combat Vehicles, Army	FY 1997 Requirements Per FY1998/1999 Budget	FY 1998 Requirements Per FY1998/1999 Budget	Increase or (Decrease)
Activity 1 - Tracked Combat Vehicles	1,344	966	(348)
Activity 2 - Weapons and Other Combat Vehicles	104	49	(22)
Activity 3 - Spares and Repair Parts	20	21	-
Reimbursable Program	179	146	(33)
	1,647	1,212	(435)

EXPLANATION BY ACTIVITY

Activity 1 - Tracked Combat Vehicles. The decrease is associated with (1) the congressional adjustments (-\$317.2) in FY 1997 (depicted on the preceeding page), (2) one-time funding in FY 1997 for the Life-of-Type buy for the Cummins engine (-\$30.0), (3) end of production funding for the Paladin and FAASV (-\$109.0), (4) LRIP funding for the Bradley Fire Support Team vehicle BFIST (-\$14.0) and increased funding in the Abrams Upgrade program for production cut-in for SEP, II Generation FLIR, and transfer of OMA resources for the workload at Anniston Army Depot that supports the Upgrade program.

Activity 2 - Weapons and Other Combat Vehicles. The decrease is associated with the congressional adjustments in FY 1997 (-\$51.0), other minor program reductions (-\$9.0), and initiation of the M119 Howitzer modification program (+\$5.0)

Activity 3 - Spares and Repair Parts. Not applicable.

Reimbursable Program. The decrease is a result of an expected decrease in the amount of projected FMS sales.

COMPARISON OF FY 1998 PROGRAM REQUIREMENTS AS REFLECTED IN THE FY 1998/1999 BUDGET WITH THE FY1999 PROGRAM REQUIREMENTS AS SHOWN IN THE FY 1998/1999 BUDGET SUMMARY OF REQUIREMENTS (In Millions of Dollars)

Appropriation Procurement of Weapons and Tracked Combat Vehicles, Army	FY 1998 Requirements Per FY1998/1999 Budget	FY 1999 Requirements Per FY1998/1999 Budget	Increase or (Decrease)
Activity 1 - Tracked Combat Vehicles	966	1,379	383
Activity 2 - Weapons and Other Combat Vehicles	49	8	32
Activity 3 - Spares and Repair Parts	2	14	(2)
Reimbursable Program	146	128	(18)
	1,212	1,602	390

EXPLANATION BY ACTIVITY

Vehicle (\$32.0) and the Bradley Base sustainment (\$217.0); and a ramp in production in the Abrams Upgrade Program for the System Activity 1 - Tracked Combat Vehicles. The increase is the result of a ramp-up of production quantities for the Command and Control Enhancement Program (SEP) (\$99.0); as well as programmatic increase in the Carrier modification program (\$14.0), the Improved Recovery Vehicle (\$12.0), and the Heavy Assault Bridge (\$10.0).

(\$4.1), the MK19-3 Grenade Launcher (\$13.1), the Armor Machine Gun (\$7.0), the M4 Carbine (\$4.5), and modifications for the Carbine Activity 2 - Weapons and Other Combat Vehicles. The increase is associated with increased procurement quantities for the M16 Rifle

Activity 3 - Spares and Repair Parts. The decrease is associated with a reduced requirement for Abrams and Paladin Initial spares.

Reimbursable Program. The decrease is associated with a reduction in anticipated FMS cases.